

1911.
—
QUEENSLAND.

20

ANNUAL REPORT

OF

THE COMMISSIONER OF PUBLIC HEALTH

TO

30TH JUNE, 1911.

PRESENTED TO BOTH HOUSES OF PARLIAMENT BY COMMAND.

BRISBANE:

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ANNUAL REPORT OF THE COMMISSIONER OF PUBLIC HEALTH.

TO THE UNDER SECRETARY, HOME DEPARTMENT.

12th August, 1911.

SIR,—I have the honour to submit the following Report upon the work of the Department under my control for the year ending 30th June, 1911, together with certain comments and detail bearing upon the Public Health of Queensland.

I.—STATISTICAL.

The area of the State of Queensland is 670,500 square miles, and the estimated mean population on 31st December, 1910, was 592,201. The crude birth-rate (total births per 1,000 of mean population) for 1910 was 27.31, a higher rate than any corresponding annual rate since 1902. The crude death-rate (deaths per 1,000 of

mean population) was 9.70. The marriage rate per 1,000 of mean population was 8.05.

The infant mortality rate (deaths under one year per 1,000 born) was 63.1. This is the lowest infant mortality rate recorded for any year in the decade. The highest was 119.9 in 1903, when 1,424 children died out of 14,216 born. The Queensland figures for these years show that a high birth-rate is not necessarily accompanied by a high death-rate. Those for the past seven years also dispose of the allegedly harmful effects of the Queensland climate on infant life, which are occasionally stated by ill-informed observers in other States.

The following table, supplied by the Government Statistician, summarizes the principal vital statistics of Queensland for the last decade:—

SUMMARY OF PRINCIPAL VITAL STATISTICS OF QUEENSLAND FOR DECADE 1901-1910.
(Furnished by Government Statistician.)

—	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.
1. Estimated Mean Population ..	505,695	513,612	512,690	519,178	525,728	532,783	541,204	555,171	571,044	592,201
2. Number of Births	14,303	14,216	12,621	14,082	13,626	14,019	14,542	14,828	15,554	16,173
Rate per 1,000 Mean Population ...	28.28	27.68	24.62	27.12	25.92	26.31	26.87	26.71	27.24	27.31
3. Deaths under 1 Year	1,458	1,424	1,513	1,072	1,029	1,047	1,122	1,043	1,119	1,020
Rate per 1,000 Born	101.9	100.2	119.9	76.1	75.5	74.7	77.2	70.3	71.9	63.1
4. Deaths all Ages	6,007	6,204	6,346	5,250	5,503	5,095	5,599	5,680	5,530	5,145
Rate per 1,000 Mean Population ...	11.88	12.08	12.38	10.11	10.47	9.56	10.35	10.23	9.68	9.70
5. Deaths in Public Institutions ...	1,598	1,693	1,761	1,452	1,661	1,565	1,744	1,796	1,705	1,865
6. Number of Marriages	3,341	3,243	2,933	3,078	3,173	3,588	4,105	4,009	4,512	4,769
Rate per 1,000 of Mean Population	6.61	6.31	5.72	5.93	6.04	6.73	7.58	7.22	7.95	8.05

Aboriginal natives are not included in this table. The total number of aboriginals in Queensland and its dependencies is estimated by the Chief Protector of Aborigines at, approximately, 22,000.

II.—GEOGRAPHICAL AND EPIDEMIOLOGICAL RELATIONSHIP.

The geographical relationships of Queensland are of much interest and importance from the epidemiological standpoint. Ten considerable ports are distributed along 2,000 miles of coastline, and some 200,000 persons of European blood live within the Tropic of Capricorn. Some 1,400 miles to the north of Brisbane, Thursday Island forms the main gateway for sea-traffic from the Far East of Australia. The principal coastal ports are linked up by railway to large areas which they serve as entry ports. Further railway developments have been authorised, which will join the southern coastal centres to those in the north, and which will therefore increase greatly the speed of transit between Asia and its dependencies, and the principal centres of population in Queensland and other States.

Across Torres Straits, some 100 miles from Thursday Island, lies Papua, with German and Dutch New Guinea in direct continuation to its north and west.

A series of islands in Torres Straits, lying within the jurisdiction of Queensland, extend to within a comparatively short distance of the Papuan coast. The Aru Islands are some 600 miles from Thursday Island; the Spice Islands, approximately, 900 miles; Celebes, 1,500 miles; Borneo, 1,800 miles; Manila, 2,000 miles; Timor, 1,000 miles; and Batavia (Java), 2,100 miles.

Smallpox has within recent years prevailed in these and other Asiatic dependencies. In 1910 cholera was prevalent for some months in Java, and plague is at present causing considerable mortality there. Severe and fatal forms of malaria, and tropical dysentery, exist in New Guinea, and it is not at all certain whether Dutch New Guinea is free from endemic smallpox.

Inquiry at Thursday Island last year elicited a statement from a well-informed medical officer that a widespread outbreak of smallpox had occurred in the Aru Islands some four years

before. Cholera and smallpox are still endemic in the Philippines, although strenuous efforts towards their suppression are made by the American administration.

The average period elapsing between infection with smallpox and the earliest appearance of symptoms is twelve days. Cholera may be conveyed by human "carriers" who show no outward evidence of their infectivity.

A twelve-knot steamer could, after allowing for ordinary stoppages and detentions, land a smallpox-infected person from the Aru Islands, the Spice Islands, Celebes, Borneo, Manila, Timor, or Java, in either Cairns or Townsville, some two or more days before his illness began, or before there would be the smallest chance of its detection by a quarantine officer. An infected person from the Aru Islands could even be landed in Brisbane some days before the expiration of his incubation period. The first forty-eight hours of an ordinary attack of smallpox resemble a smart attack of dengue or influenza, and the characteristic eruption does not appear until the third day. Although the sufferer is highly infectious during the stage preceding the eruption, it is improbable that sufficient suspicion would be aroused to secure his effective isolation. The effects likely to result from the presence of such a source of infection, for example, in a large hotel during the northern tourist season, in the midst of a practically unvaccinated population, need no description. Smallpox in an unvaccinated community is probably the most virulently infectious disease known.

It is not feasible or desirable to hamper traffic and commerce by detaining vessels or passengers, even under the risky conditions indicated. Surveillance is possible, but cannot be wholly depended upon. The existing local sanitary organizations in Tropical Queensland are not at all adequate to meet emergencies arising from such dangerous and panic-producing epidemic diseases as smallpox or cholera.

Extreme promptness and accuracy of executive are essential for dealing with such emergencies, and every hour of delay adds to the risk.

The multiplicity of minute detail requiring attention in the face of an outbreak cannot, obviously, be directed from an office 700 miles away. The principal executive officers, under present conditions, would have to be medical men engaged in practice, who cannot be reasonably expected to neglect their livelihood and to bear the burdens of heavy responsibility attaching to the early handling of grave epidemic disease. At a very low estimate, the cost of an outbreak of smallpox in Queensland, which was once allowed to get out of hand, would be from £50,000 to £70,000.

For these and other reasons the prospective establishment of a sub-office of this Department in North Queensland is a matter of much satisfaction. The ordinary work of such a staff would include, of course, the general operation of the Health Acts, and the general supervision and stimulation of local sanitary administration. In time of emergency their services will be of the greatest economic value in enabling the earlier sources of infection to be promptly and thoroughly traced and rendered innocuous.

III.—COMMUNICABLE DISEASES.

STATUTORY NOTIFIABLE DISEASE.

Two thousand two hundred and fifty-eight notifications of infectious diseases have been received during the year, together with 109 notifications of deaths from phthisis. The notifications included 908 cases of diphtheria, 4 of membranous croup, 61 of erysipelas, 11 of puerperal fever, 184 of phthisis, 342 of scarlet fever, 667 of typhoid fever, 79 of ankylostomiasis, and 2 of cerebro-spinal meningitis.

Of these cases, medical practitioners in the Brisbane metropolitan area (Appendix 13) reported 150 cases of diphtheria, 32 of erysipelas, 120 of phthisis, 101 of typhoid fever, 297 of scarlet fever, and 1 of puerperal fever. Eighty cases of typhoid fever, 101 of scarlet fever, 9 of puerperal fever, 94 of diphtheria, 25 of erysipelas, and 91 of phthisis were voluntarily reported from hospitals in the metropolitan area.

DISINFECTION.

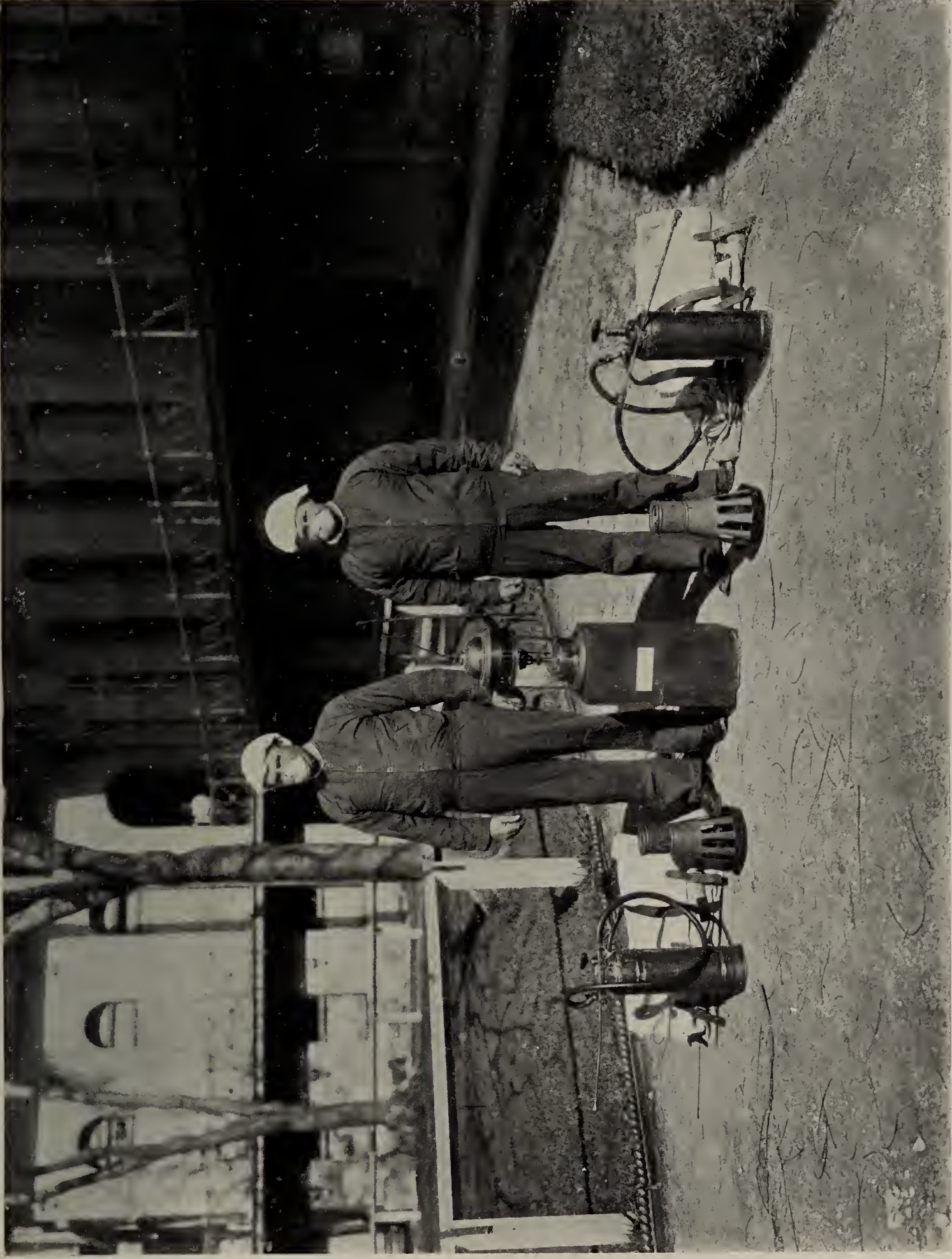
Disinfection has continued, as in previous years, to be performed by an officer of this Department for 17 of the 20 Local Authorities in the Metropolitan Area of Brisbane. Six hundred and six premises have been disinfected under this arrangement, the cost being recovered from the Local Authorities concerned. Toowong, Sherwood, and Coorparoo still carry out this work for themselves.

Disinfecting work has also been performed for the assistance of the Home Secretary's Department in connection with cases of leprosy, and of the Department of Public Instruction in connection with infectious diseases in schools.

NOTIFICATION PROVISIONS.

The provisions of "*The Health Act of 1900*" relating to notification of infectious diseases are unsatisfactory and inadequate. It is possible for a series of diphtheria cases, for example, to be admitted to the infectious wards of a hospital without any notification of the outbreak reaching this Department or the Local Authority in whose district the hospital is situated. The dangers of such a procedure will be obvious, in that children from infected houses are likely to continue to attend school, no disinfecting action can be taken; and before the existence of an outbreak becomes known to the authorities it may have assumed considerable proportions. In practice, such cases are usually notified, but the matter is of too great importance to warrant its total dependence on the voluntary action of the medical officer. Notification is designed for the special purpose of enabling the existence and location of communicable disease in any given area to be promptly and accurately ascertained, in order that action may be taken by the proper authority to prevent its spread.

This serious defect is provided for in the Health Act Amendment Bill by simultaneous duplicate notification, to the Local Authority and the Commissioner of Public Health, of all cases of infectious disease seen by medical men. This, if adopted, will remove the existing anomalies and risks, and will simplify considerably the procedure in respect of infectious diseases.



DISINFECTING OFFICERS, IN WORKING GARB.

PHTHISIS.

During 1910, 308 persons are returned as having died in Queensland from phthisis, and 343 cases were notified.

By the Australian age distribution of deaths from this disease, some 209 of these deaths will have occurred amongst people between 15 and 50. These are at the most productive and useful period of life—an age which yields the highest proportion of breadwinners, of producers and supporters of families, and of individual prosperity and happiness. At these ages, too, the maximum of misery and poverty is produced by long-continued and fatal illness. It is possible by intelligent effort to prevent this heavy toll imposed by sickness and death on life, on health, and on prosperity. The disease is an eminently preventable one, and the actual administrative measures required for dealing with it are capable of being clearly formulated, and have stood the test of experience.

The actual monetary loss to the individual and to the State caused by this disease is very great. During the twenty-seven years ending with 1907 it has been assessed at £5,248,760 for Queensland alone in lives lost and invalid outlay.

Strenuous effort is being made to increase our population by immigration from abroad, and it is obviously not economic to continue losing over 300 people each year, of whom the great majority are at the very ages when they are of most value to the State. Consumption is a disabling disease which cripples its victim for at least six months before it kills. Its onset is insidious, and the average duration of a fatal case extends over some years. Its infectivity is easily controllable, and resides in the coughed-up matter from the diseased lungs. If this matter is effectively destroyed in a prompt and cleanly manner, a consumptive person is not an active source of danger to those associated with him.

The majority of healthy people possess considerable powers of resistance to the disease, and infection, to be successful, must be of a relatively gross and massive nature. The great bulk of infection amongst adults arises from those advanced consumptives who are grossly ignorant or careless of the risk to others from indiscriminate disposal of the material which they cough up. Although actually communicable from man to man, consumption is not liable to be "caught" like scarlet fever or influenza. The successful control of consumption amongst adults, and its ultimate eradication, are to be sought in the destruction of the expectoration as it is produced. Towards this are directed the various administrative measures designed against the disease.

The majority of cases of phthisis are eminently curable if taken at a sufficiently early stage. Sanatoria are doubly useful in that they ensure the cure of a proportion of early cases, and also enable a number of less fortunate sufferers to be carefully instructed in precise methods of protecting others from infection, and themselves from reinfection, by their own sputum. Unless, however, they form a part of an organized scheme for the limitation and eradication of pulmonary tubercular disease, their good effects are necessarily much restricted.

A conference of Principal Medical Officers met at Melbourne in February of the present year, for the purpose of recommending uniform

measures for the control of consumption in the States of Australia. The more important of the measures within the range of practical administration and admitting of general application were thus summarized in their Report:—

- (1.) Universal compulsory notification of all cases of consumption throughout the Commonwealth;
- (2.) Facilities for the collection of detailed information—etiological, social, medical, hygienic, &c.—concerning each case of consumption, and the recording of such on a uniform plan;
- (3.) Legal power to regulate the home management of consumptives;
- (4.) Legal power to remove dangerous or infective consumptives into segregation;
- (5.) Legal power to detain such consumptives in segregation;
- (6.) Legal power to examine medically contacts and housemates of consumptives;
- (7.) Adequate accommodation for advanced cases;
- (8.) The establishment of sanatoria; and
- (9.) Financial assistance to the wives and families of necessitous consumptives admitted to hospitals or to sanatoria.

These represent concisely but completely the minimum scope of effort required in operations against phthisis. Notification is already provided for in Queensland, although there is reason to believe that it is not invariably followed by all medical practitioners. The second requirement is largely a matter of properly directed clerical assistance. The third, fourth, fifth, and sixth would appear to be provided for if the amending Bill receives the sanction of Parliament in its present form. The seventh is partly provided for, and by a system of hospital annexes at a few large centres could be reasonably well met. It is understood that provision is being now made for additional State sanatoria, and, when effected, this will enable the eighth requirement to be fulfilled. The question of financial assistance to necessitous dependants involves the consideration of wide special questions, certain aspects of which have been dealt with by the recent Royal Commission on Health Conditions in Queensland Mines.

Taking into account the annual monetary loss from consumption in this State under present conditions, the cost of inaugurating and conducting a definite campaign against the disease would constitute only a very moderate insurance paid on the capital and annual values of an effective population.

TYPHOID FEVER.

A low estimate of the cost of typhoid fever in Queensland is £12 per case. Both from its age incidence, and the long period of disablement which it causes, typhoid fever is a peculiarly costly and uneconomic disease. The bill for 1910-11, which has had to be paid on its account by the individual and the State, amounts to at least £8,000, exclusive of the loss represented by deaths.

For all practical purposes, typhoid fever is spread by discharges from the bowels or kidneys of human beings which contain the specific organisms of the disease. These discharges are swallowed by the victim and, provided that his bodily powers of resistance are not sufficient to overcome the introduced infection, the disease is set up in his body. In plain English, the ordinary sufferer from typhoid fever has eaten or drunk some of the faeces or urine of an infective person. Whether the infective material is conveyed in water or milk, in oysters, icecream, watercress, or raw vegetables; whether it is transferred by flies, or by the infected fingers of a milker or a cook, or whether it is taken in from a fouled garment or article, or from the victim's own fingers, matters not.

The control of typhoid fever depends entirely on the protection of others from contact with the discharges of those whose bodies contain the specific organisms of the disease.

Those who can spread typhoid fever need not necessarily display signs of illness. The discovery of the "typhoid carrier," and the known existence of very mild cases which escape ordinary notification, have placed the epidemiology of this disease in a new light during the past few years.

The term "carrier" is applied to those persons in whose bodies pathogenic organisms exist, but who show no symptoms. There is usually in these cases a previous history of typhoid fever, or of some obscure illness which was probably a mild or a typical attack of typhoid fever. Numerous outbreaks are recorded, however, as having been caused by persons who have never had the disease. A notable one is that of "Typhoid Mary," a cook, who during six years infected twenty-six persons living in six families residing in five localities in the United States. It is estimated by European observers that from 1 to 4 per cent. of all cases of typhoid fever become chronic carriers for ten weeks or more after convalescence. Frosch (*Klin. Jahrb.*, Jena 1908, xix., 537), quoted by Chapin, reports that of 6,708 cases of typhoid fever examined, 310, or 4.62 per cent., continued to excrete bacilli for over ten weeks, 64 continued to excrete bacilli for from three months to one year, 87 for one to three years, and 15 for three and one-half years.

Many carriers do not excrete their bacilli constantly. Davies and Hall (*Lancet*, 1908, 11, 1585) investigated a case in which a woman carrier caused two severe outbreaks, one in a girls' school and one in a public institution where she handled the milk. In seven examinations of the discharges of this carrier, bacilli were only found in two.

Carriers thus may undoubtedly be the cause of outbreaks of typhoid fever. But all cases of typhoid fever are not caused by carriers, and most carriers are not always likely to infect other people. Mild cases of the disease, especially in children, are probably responsible for at least as many cases as are carriers. Nevertheless, the carrier is of considerable importance at all times, and when pursuing any occupation which involves the handling or preparation of food these persons become actively dangerous to those associated with them.

Even ordinary cleanliness is not sufficient to protect others from risk. The characteristic bacilli of the intestine are to be found on the

hands of from 5 to 10 per cent. of ordinarily clean people (Chapin). Intestinal bacteria have been recovered from the finger nails and hands of cleanly persons after using the closet and toilet (Hall and Winslow). After using an ordinary closet the fingers are almost certain to be infected with traces of excremental matter, and the proportion of employees handling foodstuffs who invariably wash their hands after using the closet is, probably, very small.

These facts indicate the necessity for the strictest possible attention to protective detail, in all dealings with excremental matter in communities, and also point to the advisability of taking definite legislative steps for the protection of the public against persons who act as typhoid carriers. It is scarcely possible for any fair-sized community to avoid the presence of some unknown carrier, and if the local arrangements for dealing with nightsoil are carelessly designed or badly managed, spread of the disease is almost inevitable.

The part played by flies in spreading typhoid fever is being investigated by many bacteriologists and zoologists, and so far the weight of evidence appears to incriminate these insects as fairly frequent conveyers of intestinal disease of several kinds. Their action is sufficiently simple and direct, for it is a matter of a few moments only for a fly to transfer itself from an infected and ill-kept privy to the domestic milk-jug. For these reasons close and effective regulation of local sanitary systems is very desirable.

The isolation of all typhoid carriers is neither possible nor desirable. It would be impossible to confine a large proportion of convalescents for months after their recovery, and it would be even more impossible to locate all the carriers in the community. Even known carriers are not necessarily an active danger to the public. But it is very necessary in the public interest that powers of the nature contained in the Health Act Amendment Bill should be taken to secure the detection of suspected typhoid carriers, to locate the exact whereabouts and occupation of all persons known to be carriers, to enable their occupations to be so regulated as to prevent gross risks to the public from infection of milk or other foodstuffs, and, as a last resort, to secure the segregation of the small minority who under such conditions and after all necessary instructions and warning might refuse to take the necessary steps to protect others.

DIPHTHERIA.

This disease has exhibited a tendency to assume a severe type during the year under review, especially in the metropolitan area, and in Southern Queensland. The number of cases for the year (908) was greater by 344 than that for 1909-10, and it would appear that this was due to an epidemic wave spreading from the Southern States.

As is usual with diphtheria, children provided the great bulk of notified cases, and the effect of school-spread was evident.

Schools form a potent factor in the transmission of this disease, owing to the unavoidable facilities afforded by them for infection from "carriers" and missed cases amongst the children.

Closure of the school is of little use, as the unrecognised infectious individual will return on reopening and will continue to infect others.

Moreover, this procedure interferes seriously with the school work, and wastes much time and money without conferring any appreciable benefit. The only rational method of attacking a school outbreak consists in carefully excluding all suspicious cases and all children from infected houses, obtaining swabs from the throats of all children in the infected parts of the school, and examining these swabs for virulent forms of the specific bacillus. Carriers and missed cases can thus be detected and excluded until they are free from virulent diphtheria bacilli. This method has been employed during the year under review, in connection with the medical inspection of schools, and a diphtheria carrier in one of the Brisbane State schools was thereby detected and excluded.

Special arrangements are now being made whereby a large stock of sterilized swabs, and of the requisite culture material, will be constantly maintained at the Department's Laboratory, for the purpose of dealing promptly with school outbreaks.

Diphtheria is an almost typical example of a disease which requires human contact and human association for its spread.

Drains and nuisances have probably nothing at all to do with its introduction or spread.

It is therefore of extreme importance that cases in households whence children attend school should be promptly notified to the health authorities and also to the school teacher, in order that the infection may not be spread in schools by means of carriers. It is also advisable that powers should be taken to authorise the examination by medical officers of other persons in such houses, whenever it becomes necessary to follow up any given source of infection. By these means alone is it possible to act with precision in preventing or limiting a school outbreak of diphtheria, and in their absence the work must necessarily be done more or less in the dark, so far as the definite location of culture sources of infection is concerned. These powers are included in the Health Act Amendment Bill, and will, if granted, assist to a very material extent the work of the school medical inspectors and the health authorities generally in dealing with outbreaks of this dangerous and costly disease.

SCARLET FEVER.

An outbreak of scarlet fever occurred in the metropolitan area and in parts of Southern Queensland during the first and second quarters of 1911, resulting in the notification of some 398 cases. The type was mild, but in not a few instances after effects became evident in the shape of kidney disease and ear disease, especially amongst children who had not received medical attention.

Several schools were invaded, and during March and June it became necessary to undertake special inquiries. Over 2,000 children were then examined in and about Brisbane, and 68 of these were excluded as suffering from definite or suspicious evidences of recent scarlet fever. The outbreak began to decline shortly after this step was taken; and, although it cannot be claimed that the measure was wholly responsible for the practical disappearance of the disease from the schools, it undoubtedly played a considerable part in securing this desirable result.

Unfortunately, it is not at present possible to detect scarlet fever carriers or mild cases by the conclusive methods which can be employed against diphtheria. It is, nevertheless, important that reported cases in the households of school children should be promptly notified to head teachers, and that authorised medical officers should be empowered to follow suspicious traces of infection into these households, in the manner already stated in respect of diphtheria.

ANKYLOSTOMIASIS.

Seventy-nine cases of this disease have been notified, the majority coming from the Ingham district. It is probable, however, that this understates the true condition of affairs, especially in the northern parts of coastal Queensland, and that the disease is relatively prevalent amongst children.

Before this matter can be settled, however, a considerable amount of detailed inquiry will be needed, and it is anticipated that the prospective appointment of a medical officer for Northern Queensland will enable it to be investigated, amongst other important questions. The recently organised system of medical inspection of schools will also enable valuable field work to be done in the future, in connection with this disease.

So far, ankylostomiasis does not appear to have wrought any serious or permanent racial damage in Queensland, and personal observations on school children in the North have failed to yield results at all similar to those recorded by American observers for certain of the Southern United States.

During my inquiries as a member of a Royal Commission on the Health Conditions of Queensland Mines, I was unable to detect any clinical evidence of ankylostomiasis amongst miners, or any apparent tendency to physical degeneration amongst those miners who had been born and brought up in Northern Queensland. Nevertheless, ankylostomiasis exists amongst children, probably to a fairly considerable extent in some places, and certainly requires careful investigation. This can only be effected by systematic field and laboratory work, conducted by properly trained observers, and correlated by arrangement with that of the Australian Institute of Tropical Medicine.

DYSENTERY.

A severe outbreak of tropical dysentery occurred at Thursday Island and in some of the islands in Torres Straits during December, January, and February.

The incidence was chiefly upon the coloured races, and the case mortality is stated to have been high. The majority of deaths were amongst children and old persons.

In consequence, dysentery was proclaimed as a notifiable disease under "*The Health Act of 1900*" in the Thursday Island area from 19th February, 1911.

Action taken by the Government Medical Officer (Dr. Wassell), and by the Local Authority, eventually resulted in control of the epidemic, but the occurrence is exceedingly significant of the results which must be expected should cholera or smallpox gain entrance to these parts of Queensland from any of the endemic and epidemic centres in Eastern Asia and its geographical dependencies.

IV.—PLAGUE AND RAT DESTRUCTION.

No case of plague in either man or rat has been reported during the year under review. This is the second year since 1900 during which this desirable result has been attained in respect of human cases, and the first in which no instance of rat-infection has been recorded. This is, in my opinion, ascribable to unremitting persistence in the work of destroying rats and of securing their exclusion from dwellings and work places. The outbreaks which occur from time to time in Eastern Asia, with whose chief dependencies we are in relatively close geographical relationship, indicate that the pandemic has not yet begun to decline.

Freedom from this costly and dangerous disease can only be maintained by continual persistence in the measures which have secured it.

The extent of rat operations in the whole State and in the metropolitan area is shown in Appendix 6. 66,668 rats and 5,949 mice were destroyed during the year, and 30,545 carcasses were submitted for examination at the Department's Laboratory. 14,494 carcasses were also examined at other centres for signs of plague.

The monetary damage wrought by rats has been further investigated, and has been found to be very great in certain cases. One firm, in applying for the assistance of the Department, estimated their losses from the depredation of these vermin at £500 annually. Two visits from the rat-gang resulted in the destruction of nearly 500 rats, and advice given by the Department's staff concerning details of construction required for preventing infestation was adopted with satisfactory results. Assistance was also requested on behalf of the sugar-growers in Northern Queensland, many of whom suffer severely from the destruction of growing cane by the animals. Returns show that a loss of £150 per annum in this way is not unusual.

An expert officer was accordingly instructed to confer with representatives of the growers, and the lines on which organised action could be best taken were drawn up and communicated to them.

A systematic inquiry has been carried out in the metropolitan area concerning the conditions of food supply and harbourage on private premises and elsewhere, which evidently enable the rat population to repair losses resulting from suppressive action.

This has served to bring to light a large number of defects of construction or management of premises, which have undoubtedly assisted in the propagation and preservation of the animals. Hitherto no legal power has existed to enable such matters to be controlled and dealt with, and until such is provided the problem cannot be solved in any satisfactory way. Whilst rats are permitted to breed as fast as the Department's staff can destroy them, the task of destruction resembles that of Sisyphus and his stone.

Until the rat problem is satisfactorily settled, however, whether by rat destruction, or rat exclusion, or both, the risk of reintroduction or recrudescence of plague will continue to hang over our heads, with all its disastrous and expensive consequences.

Suitable provision for dealing with it is included in the Health Act Amendment Bill.

V.—LEPROSY.

"*The Health Act of 1900*" does not apply to this disease, which is controlled for State purposes by a special Act ("*The Leprosy Act of 1892*"), administered by the Home Secretary. Leprosy is included as a quarantinable disease under "*The Quarantine Act, 1908*," of the Commonwealth, and leper lazarets are thus brought within the scope of Federal action.

In November, 1910, the Peel Island Lazaret was proclaimed as a quarantine area under this latter Act, and regulations have been drafted for controlling ingress and egress of persons and things.

By courtesy of the Home Secretary's Department, I am indebted to Dr. Linford Row, Medical Superintendent of Peel Island Lazaret, for an interesting Report on the working of the institution for the year under review. A Table of cases compiled by Dr. Row appears in Appendix 4.

Eighty-five cases were under treatment at the lazaret during the year; 69 remained on 30th June; 7 new cases were admitted, and 16 died; 28 were classified as nodular leprosy, 48 as tuberculo-anæsthetic, and 9 as anæsthetic leprosy.

Of those admitted during the year, one displayed the nodular form of the disease; the remainder the tuberculo-anæsthetic form. Two came from Mackay; the others from South Brisbane, Rockhampton, Buderim Mountain (near Nambour), Crow's Nest, and Dunwich respectively. Two were kanakas, four were born in Queensland, and one in New South Wales.

The races and nationalities comprised 18 Queenslanders of European descent, 2 from New South Wales, 3 English, 2 Europeans other than English, 1 Japanese, 3 Chinese, 1 Cingalese, 34 kanakas, 1 half-caste kanaka, 14 aboriginals, and 6 half-caste aboriginals.

One of the surviving cases has been segregated for thirteen years, 1 for nine years, 3 for eight years, 3 for seven, 2 for six years, and 8 for five years.

Five patients have so far improved as to warrant their removal from the lazaret to an isolation camp at the other side of the reserve, for observation during a period of six months, and for their protection from possible reinfection.

One case occurred at the Benevolent Asylum, Dunwich, in the family of an officer of the institution. Dr. Row regards the possibility of latency of the disease in the members of a leper's family, and subsequent continued exposure to the surroundings in which the sufferer has contracted his infection, as a grave factor in the development of subsequent infection amongst them. He is also of opinion that leprosy is more widespread in Queensland than is commonly believed, and that only a small proportion of the existing lepers are discovered and segregated.

A supply of purified Chauhmoogra Oil (anti-leprol) was obtained during the year at the suggestion of Dr. Breinl, Director of the Australian Institute of Tropical Medicine. Dr. Row states that a large number of the patients are taking this, either alone or in conjunction with Gnaiacol treatment.

Photographic and microscopic apparatus was provided during the year for the investigation of cases undergoing treatment.



DEPARTMENT'S RAT-GANG, METROPOLITAN AREA, BRISBANE.





DESTROYING RAT-HARBOURAGE.



“ GOT HIM ! ”





DIGGING OUT A RAT-WARREN.



SMOKING-OUT BURROWS.

Nastin treatment has proved a failure at Peel Island. A recent report concerning its use at the Mahaica Leper Asylum in British Guiana also records disappointing results, as, although four patients were discharged as cured, the Government Bacteriologist is doubtful whether their improvement is definitely traceable to the Nastin treatment, and several others died whilst under the treatment.

VI.—MARITIME QUARANTINE AND ITS LIMITATIONS.

Maritime quarantine is administered under "The Quarantine Act, 1908," of the Commonwealth, the Commissioner of Public Health acting as Federal Chief Quarantine Officer (General) in respect of ships, goods, and human beings. Twelve medical quarantine officers are located, respectively, at Thursday Island, Brisbane, Bundaberg, Bowen, Cairns, Cooktown, Innisfail, Gladstone, Mackay, Maryborough, Rockhampton, and Townsville. An inspector of shipping and fumigation performs duty at Brisbane, and the rat destroyers at Bundaberg, Cairns, Maryborough, Mackay, Rockhampton, and Townsville act as ship inspectors and fumigators when required. Maritime quarantine stations are situated at Friday Island (Torres Strait) and Magnetic Island (Townsville).

A considerable amount of extra work has been thrown on the headquarters staff under this arrangement, but from the administrative standpoint it has worked smoothly and efficiently.

No quarantine has been ordered during the year in Queensland. A released passenger from the R.M.S. "Mooltan" arrived in Queensland in April, and was kept under surveillance for the requisite period.

Arrangements have been made whereby vaccine storage depôts for emergency cases have been established at Brisbane (400 tubes), Rockhampton (100 tubes), Cairns (150 tubes), Townsville (150 tubes), and Thursday Island (200 tubes), under a co-operative arrangement between the State and Commonwealth. The vaccine is kept in cold storage under the control of the local quarantine officer, and fresh supplies will be forwarded as required in vacuum flasks. Tests of its potency are made from time to time as opportunity arises. A small consignment is also obtained fortnightly from New Zealand for current use, and is supplied to medical practitioners at cost price on application.

The most imminent disease risk with which Queensland has to deal is that of smallpox. Her geographical relationships make its advent to her shores a matter of practical certainty in the near future, and the unvaccinated condition of the population will render its suppression an undertaking of extreme difficulty should it gain a footing. Quarantine alone is wholly unable to prevent with certainty the entry of this or any other epidemic disease, as seaboard inspection is always liable to be forced by incubatory cases, or even by those who present very slight or equivocal evidences of their disease, and whose real condition is wilfully or ignorantly concealed. The only real defence against the spread of epidemic exotic disease is to be found in the organization and powers provided by the State. In respect of smallpox this implies compulsory and closely enforced laws

for vaccination and revaccination, such as exist in Sweden and Germany. Were such laws in force throughout Queensland we could afford to snap our fingers at a threatened invasion of smallpox. As it is, we are liable at any time to find a serious outbreak in progress, owing to the landing of some individual whose incubation period of twelve days has sufficed for his conveyance, in apparently sound health, from some Eastern centre of infection to one or other of our large coastal towns.

Nevertheless, I am not at present prepared to recommend the universal application of such statutory power securing vaccination as is available under "*The Health Act of 1900.*" Experience has shown that a widespread inability exists amongst a large section of the public to recognise the facts in this particular case and to make the correct deductions from them. Public opinion cannot be driven, and a considerable official relationship with Australian people in three States has convinced me that unless smallpox becomes epidemic, or unless compulsory vaccination and revaccination are uniformly enforced in every State, enforcement throughout any one State is impracticable as a general measure. Popular education, or the ghastly disease itself, may some day remove this curious and dangerous prejudice.

Fumigation of vessels and of the effects of deck passengers from Eastern ports is carried out on a considerable scale. The disinfecting depôts which will shortly be created at the principal ports will facilitate this work very materially, in addition to reducing the charges for disinfecting goods.

VII.—TROPICAL DISEASES.

The prospective establishment of a small trained staff in Northern Queensland, with a medical officer in charge, will enable much needed field work to be done in connection with tropical disease. Valuable co-operation in this direction is anticipated from the Australian Institute of Tropical Medicine at Townsville, of which Dr. Anton Breinl is Director. Personal acquaintance with the work of this Institute enables me to testify to its great importance and value as an economic factor in the development of Tropical Queensland. It is, however, essentially a research laboratory, and the extent of the present staff does not permit much field duty to be undertaken save at the cost of laboratory work. It is hoped that, by co-operative effort, the Northern staff when installed, the Medical Inspection of Schools organization, and the Department's Laboratory may all be utilised to some extent for the collection of material possessing scientific interest or value in connection with the diseases of warm climates, with a view to its examination at the Institute. Sprue, dengue, beri-beri, and at least two unclassified fevers of considerable economic importance yet await the elucidation of their natural history, and much research is still required concerning the precise methods of transmission in Northern Queensland of ankylostomiasis, dysentery, and malaria. It is only by means of laboratory research that accurate and effective means of dealing with disease in the field can be formulated, and active co-operation between field and laboratory workers is hence of great practical value.

VIII.—FOOD INSPECTION AND FOOD ADULTERATION.

The tables appearing in Appendices 7, 8, 9, and 10, together with the Report of the Government Analyst (Appendix 3), indicate the work done in enforcing food-purity, so far as legal and financial circumstances have admitted.

Over 127 tons of foodstuffs were seized and destroyed as unfit for human consumption, and 140 samples were purchased for analysis. The premises of 21 bakers were visited in order to enforce the provisions of the Act relating to the weight of loaves. Thirteen prosecutions were undertaken on account of milk adulteration, and three on account of refusal to sell, or obstructing the inspector. All were successful, a total sum of £134 11s. 4d. being allowed in fines and costs.

Eight prosecutions were also undertaken against bakers for having light-weight bread in their premises, and one for obstruction of the inspector. All were successful, and a total sum of £42 15s. 11d. was allowed in fines and costs.

Considerable economy and convenience in administration of the food sections of the Act is rendered possible by the co-operation of the Brisbane Traders' Association. Under this arrangement, samples of new food products, or new brands thereof, are submitted for analysis and examination before being placed on the market, and in the event of their being found to be adulterated or unfit for consumption, the trade is warned by the Association to cease stocking or selling the article. This has in several instances resulted in protection of the public against undesirable articles of food, and protection of the trade against the risk of incurring legal proceedings by unwittingly vending foodstuffs of an undesirable or dangerous character. It serves to illustrate the appreciative attitude of an important section of the food-trade towards action for suppressing adulteration. The Master Bakers' Association of Queensland has also extended valuable assistance to our work.

The number of milk samples purchased for analysis (122) shows an increase of 44 on those of last year. The percentage found to be adulterated (23 per cent.) is slightly lower than in 1909-10. The average percentage of added water (7.9 per cent.) is also slightly lower. Despite the improvement in these respects which has occurred since 1906, when no less than 56 per cent. of the samples analysed were found to be watered, milk adulteration is still flagrantly prevalent, and requires for its suppression more definite legal powers and a more extensive organization for its detection and suppression than is possible under the present system.

The systematic adoption of the freezing-point test as a confirmation for added water in milk samples has provided a valuable and conclusive means of protecting both the public and the dairyman. This test depends upon the fact that whilst milk as drawn from the cow freezes at a certain specific temperature whatever its content in fat or solids non-fat, the addition of water alters the freezing point, the exact figure depending upon the proportion of water added.

One effect of this test has been to show that the normal content of Brisbane milk in fat and solids non-fat is well above the legal standard (3 and 8.5 per cent. respectively), and that the

fat content is considerably higher than that usually found in mixed milks elsewhere. To quote from the Government Analyst: "The average fat contents of samples not adulterated was found to be 4.1 per cent. The class of milk which can be supplied is shown by the results of analysis of samples of milk from the Lady Chelmsford Milk Institute.

Twenty-five samples of the morning milk and 28 samples of the afternoon milk were tested. The average composition was as follows:—

—	Morning.	Afternoon.	Queensland Legal Standard.
Solids not fat ...	9.3	9.40	8.5
Solids fat	4.80	5.30	3.0

The dairy which supplied these samples is situated a short distance outside Brisbane and is run on commercial lines by a private individual receiving no subsidy or other assistance. They represent the mixed milk of an ordinarily well-selected and well-cared-for herd. The samples were taken without notice, and at irregular intervals, from the milk as delivered at the Institute.

A further outcome of the freezing-point test has been the final settlement of the "freak-cow" question. It is a well-known fact that cows are occasionally met with which give an abnormally low yield in fat and solids non-fat, and this has been frequently used as a defence in milk prosecutions.

During the year two samples were found by means of the freezing test to be genuine milk although slightly below the legal standard for solids non-fat. The vendors were advised to apply to the Department of Agriculture and Stock for information as to the best methods for improving their herds. In another case, where abnormality of the cows was pleaded as a defence, the Government Analyst appeared as a witness at the proceedings and gave evidence which disposed conclusively of the arguments set up.

The special attention which has been devoted to milk is justified by its vital importance as an article of diet amongst those who are especially liable to injury from adulteration or impurity, and also by the great possibilities of fraud which attach to its retail sale. The Government Analyst points out that if the percentage of adulterated milk sold in Brisbane and suburbs is fairly represented by the samples obtained for analysis, some 36,340 gallons of water will have been sold for £2,400 under the guise of milk during the past year in the metropolitan area alone. A further undesirable feature of milk adulteration is found in the fact that the added water may possibly be obtained from dangerous and dirty sources, and may thus contain the germs of zymotic disease.

Milk, however, forms only one of numerous articles of food, whose purity and freedom from sophistication are essential to the due protection of the public health and the public pocket.

Examples of adulteration affecting health, and even life, are easy to conceive—for example, in the case of a diet carefully planned by a physician for the treatment of some particular disease, or where a sickly infant is fed on some artificial food which claims to be free from indigestible starches. They are frequent enough in actual practice wherever the law is not sufficiently wide in its scope and administration to enable

them to be prevented. However high may be the general standard of commercial morality, it would be futile to expect otherwise whilst the public is attracted by cheapness and whilst the adulterator can compete on equal terms with the honest vendor or manufacturer. Adulteration of food is not practised on account of any inherent malignity in the nature of vendors or manufacturers, but purely for purposes of profit.

The introduction of an amendment of "*The Health Act of 1900*," which will bring Queensland into line with other Australian States in respect of food-purity, is therefore a matter of much satisfaction.

In the absence of such legislation we must inevitably provide a "dumping ground" for many articles which fail to meet the standards and requirements of other States. At the date when the food sections of "*The Health Act of 1900*" were considered, pure-food legislation was in its infancy. Since then, however, a large amount of experience has been gained in Australia and elsewhere, and the results of this experience have been largely embodied in the Health Act Amendment Bill which is about to be submitted to Parliament. The experience of other States has shown that the various trades affected by legislation of this character have nothing to fear and all to gain, that no injury results to them, and that a great and real need has hitherto existed for the protection of the public and of the honest tradesman. It is therefore no new or untried departure.

IX.—SCHOOL HYGIENE.

The organization of a system of school medical inspection was undertaken during the latter part of 1910 at the request of the Minister for Public Instruction, and a detailed scheme for that purpose was submitted towards the end of that year.

A whole-time Medical Inspection of Schools (Dr. Eleanor Bourne, M.B. Ch.M.) was appointed by the Department of Public Instruction on 1st January. By arrangement with that Department, the general direction of the professional staff employed in this work was undertaken, and the requisite details of organization were completed with the assistance of Dr. Bourne. Work in the schools began on 31st January, 1911. The Odontological Society of Queensland kindly offered to perform a complete dental inspection of one school in the metropolitan area, and the results showed very clearly that the appointment of a school dentist was advisable. Mr. Haenke, L.D.Q., was temporarily selected, and his appointment was later made permanent. A school nurse was appointed on 6th March.

Up to 30th June, 1911, 3,068 children were examined by the Medical Inspector, and over 800 by the School Dentist. The detailed results and the general scope of the organization have been described in a report which is included in that of the Department of Public Instruction. In addition to this systematic inspection work, over 2,000 children were examined in connection with outbreaks of scarlet fever and diphtheria in the metropolitan schools, a course of lectures on hygiene in its special relation to schools was delivered to teachers at the Central Technical College, and numerous demonstrations on questions of child-health and hygienic school management

were given to teachers at the schools. Several public addresses on school hygiene have also been delivered by Dr. Bourne and myself.

This work has received hearty support from teachers, from parents, and from the children themselves.

The results have shown its practical value both from the educational standpoint and from that of the public health. The necessary details of organization having now been completed, and the system placed in working trim, it is proposed to undertake at an early date certain special inquiries in Western and Central Queensland in connection with eye diseases prevailing amongst school children there. Certain special problems of racial importance in Northern Queensland will, it is hoped, also receive attention from the organization at a later date.

A number of matters relating to technical sanitation have also been dealt with at the request of the Department of Public Instruction, and a series of model lessons on elementary hygiene were prepared during the year for use in State schools.

X.—LABORATORY OF MICROBIOLOGY AND PATHOLOGY.

The Bacteriological Institute in Normanby terrace was formally transferred to the control of this Department from 16th September, 1910, together with a portion of its staff and equipment. In order to prevent its confusion with the Government Stock Institute at Yeerongpilly, of which Mr. C. J. Pound has been placed in charge, it was renamed the Laboratory of Microbiology and Pathology. Microbiological work in connection with human diseases only will now be performed at the Laboratory of Microbiology and Pathology, that required in connection with the diseases of animals being undertaken at Yeerongpilly, under the administration of the Department of Agriculture and Stock.

On 24th December, Dr. John Harris, M.B., D.P.H., was appointed Director of the Laboratory. Dr. Harris was selected from amongst a number of well-qualified applicants, and at the time of his appointment was acting as Government Bacteriologist and Assistant Medical Officer, Perth, Western Australia. Prior to this, he had worked for some time under Dr. Anton Breinl, Director of the Australian Institute of Tropical Medicine at Townsville, by whom he was strongly recommended. Dr. Harris was prevented by the terms of his engagement with the Department of Public Health of Western Australia from taking up duty before 27th March, but since then the work of re-organization and re-equipment has been pushed on vigorously.

The scope of the laboratory has been increased very considerably, and it is anticipated that, when its re-equipment is completed, it will compare favourably with any similar institution of its size in Australia.

The Queensland Branch of the British Medical Association has arranged for the transfer of a collection of interesting pathological specimens belonging to them, and for its upkeep at the laboratory at their expense. This will form the nucleus of a pathological museum, which will be of great value when a medical school is instituted by the University of Queensland.

XI.—STAFF AND WORKING.

At the close of the year under review the headquarters staff consisted of a health officer, a secretary, two clerks, a cadet messenger, a chief inspector, four inspectors, a staff nurse, a disinfecter (metropolitan area), and a rat gang (metropolitan area) consisting of a foreman and eleven men. Six rat-destroyers and fumigators were located at the principal outports.

The laboratory staff included the Director, one principal assistant, one assistant, a clerk, and a messenger.

The quarantine staff (administered under "The Quarantine Act, 1908," of the Commonwealth) comprised thirteen medical quarantine officers, an inspector of shipping and fumigation, and two caretakers of quarantine stations.

The school medical inspection organization, directed by request of the Department of Public Instruction, comprised a medical officer, a school dentist, and a school nurse.

Dr. F. W. Woolrabe, Health Officer, acted as Deputy Commissioner for five months during my absence as a member of a Royal Commission on Health Conditions in Queensland Mines.

Several changes took place during the year in the personnel of the staff. Mr. Kelly, formerly clerk at the Bacteriological Institute, was transferred to the Marine Department, and his place was filled temporarily by a typist. Inspectors Daniel and Lewis resigned in order to accept more lucrative positions outside the public service, and Inspector Wilson also left the service to enter business on his own account. Inspector Leven received an appointment in another Department. The resulting three vacancies were filled by the appointment of Messrs. Cato, Beaver, and Burton.

Mr. Beardmore acted in temporary charge of the laboratory from 17th September, 1910, to 26th March, 1911, pending the appointment of Dr. Harris, and was subsequently gazetted as Principal Laboratory Assistant.

Systematic sanitary survey of the principal centres of population has been pushed on during the year, although changes in the staff have hampered this undertaking to some extent. A list of localities visited and work done outside the metropolitan area appears in Appendix 5. In addition, 1,666 visits have been made by the Department's inspectors to premises within the metropolitan area, the majority being in connection with the rat survey work.

Intimation of 697 breaches of the Act or By-laws has been forwarded to the various Local Authorities concerned.

The results of inspection for each centre or area are recorded systematically, in order to secure ready reference to any principal detail of local sanitary executive. Precise information is thus available for use in any disease emergency, and local sanitary progress can be accurately computed and stimulated where necessary. The method also enables the Department to act as a bureau of information for local authorities who desire the results of technical knowledge and experience concerning the working of sanitary undertakings in Queensland.

The inspectors of the Department are instructed to place their technical knowledge of sanitary executive freely at the disposal of local

inspectors, and their visits to outlying localities thus exercise a valuable educational influence.

Twenty-four inquiries were ordered under section 12, and a proportion of the cost amounting to £100 7s. 7d. was refunded by the Local Authorities concerned.

Some difficulty has been encountered in obtaining suitable trained and experienced local applicants for inspectorial vacancies. The modern sanitary inspector must possess a large amount of technical knowledge and training in addition to certain personal qualities of tact and ability, if he is to be successful in his vocation. It was found necessary to recommend that the salaries attaching to these positions should be raised, and this had the desired effect of attracting suitable local applicants. In view, however, of future developments likely to eventuate if the amending Bill now under consideration receive the approval of Parliament, it is proposed to initiate a system of temporary employment for certificated men, under which they will assist the regular officers and will thereby acquire practical training and experience. By this means it is hoped that a reserve of specially experienced sanitary inspectors will be gradually built up, for the benefit of the Department and of Local Authorities.

XII.—SANITARY EDUCATION.

By a co-operative arrangement with the Department of Public Instruction and the Examining-Board for Queensland of the Royal Sanitary Institute, courses of instruction in technical sanitation have continued to be carried on at the Central Technical College. These comprise systematic lectures, and practical field demonstrations at places of sanitary interest. Queensland candidates are now able to sit for the higher certificate in sanitary science, and for the certificate in hygiene as applied to school life, granted by the Royal Sanitary Institute of Great Britain, as well as for that of inspector of nuisances. Similar certificates are granted by the Department of Public Instruction, the conditions of training and examination being identical with those of the institute.

In January, 1911, a comprehensive publication, edited by myself and entitled "The Queensland Sanitary Inspector's Guide," was issued by the Department of Public Instruction under the co-operative arrangement above alluded to. This contains twenty-five lectures by recognised authorities, and treats of all the various features of practical sanitation likely to be dealt with by sanitary inspectors in Queensland. It is approved for official use by this Department, and is supplied by the Government Printer at a cost of 5s. 6d. per copy, post free.

XIII.—SPECIAL INQUIRIES.

A number of special investigations and inquiries have been undertaken during the year. The Lazaret at Peel Island was visited on several occasions, and an investigation of the results of the Guaiacol treatment of leprosy was made in October, 1910. Inquiry was made at Muckadilla concerning the apparent therapeutic value of the water from an artesian bore in cases of rheumatism and other chronic conditions arising from disordered metabolism. An extensive series of



BUTCHER'S SMALL-GOODS HOUSE, ENTIRELY RAT-PROOF, REPLACING RAT-
INFESTED BUILDING SHOWN BELOW.



FORMER SMALL-GOODS HOUSE, BADLY RAT-INFESTED. NOW REPLACED BY RAT-
PROOF BUILDING SHOWN ABOVE.



INTERIOR OF BUILDING SHOWING RAT-INFESTATION UNDER FLOORS.



INTERIOR OF RAT-PROOF BUILDING, ERECTED TO REPLACE RAT-INFESTED
STRUCTURE SHOWN ABOVE.

tests on commercial disinfectants was arranged with the Government Bacteriologist, and the results were calculated out in order to obtain definite information concerning their reliability and relative disinfectant values. Inquiry was made into the working of the Lady Chelmsford Milk Institute, and suggestions framed for its future organization. Infants' Homes at Sandgate and elsewhere were inspected, and certain aspects of their working investigated for the assistance of the Inspector of Orphanages. A method designed to simplify the testing of milk and cream for butter-fat content was investigated with the Government Analyst, and was found to be unable to substantiate the inventor's claims.

Suggestions relating to hygienic school construction were supplied to the Department of Public Works at the request of the Under Secretary. The use and abuse of chemical disinfectants supplied to State schools, and a number of matters relating to organized school cleansing, the teaching of temperance and hygiene, and the organization and working of School Medical Inspection were advised upon at the request of the Department of Public Instruction. A series of lessons on elementary hygiene and temperance was prepared for use in State schools. A detailed inquiry into the conditions of manufacture and storage of ice-cream was continued by the Health Officer with the assistance of the bacteriological staff. Observations and information on various aspects of the mosquito problem have been collected for future use. Advantage was also taken of the facilities afforded by the work of the Royal Commission on Health Conditions in Queensland Mines to secure the sanitary inspection of a large number of mines and mining communities, and to familiarise one of the Department's Inspectors with the technical sanitary aspects of mines.

XIV.—ECONOMIC AND GENERAL CONSIDERATIONS.

The severely utilitarian and economic basis of public health administration is apt to be overlooked by those who regard the production of actual revenue as the only criterion of usefulness.

Its underlying purpose is the prevention and suppression of certain communicable diseases and certain conditions inimical to physical well-being. Each case of these diseases involves an avoidable and unnecessary expense, and a more or less

serious risk to life. In the aggregate they represent a heavy and unnecessary annual outlay. The capital of the average worker is represented by his physical health and strength, and industrial development largely depends on the human material available. Large epidemic disasters involve the temporary crippling or stoppage of commercial progress in the community affected, and not infrequently result in the permanent diversion of trade and traffic.

Modern knowledge enables these risks to be guarded against, and their evil effects to be cut short or abolished if the means are provided. Against the great majority we can apply precise measures of prevention and suppression. No longer do we tear up drains as a first measure towards discovering the exciting cause of diphtheria or typhoid fever, nor seek to explain consumption or malaria by bland generalities about "climate." The parts played by human carriers, by insects, and by animals in spreading many of the diseases which cripple or slay mankind are already well known. It is probable that before many years those diseases about which uncertainty still exists will have been brought within the scope of exact preventive action. Within the last decade the worst scourges of the tropics have been traced by patient workers and disarmed of their former terrifying powers. The youngest student of to-day possesses exact hygienic knowledge of which the trained sanitarian of twenty years ago knew nothing.

Disease is not to be explained or legislated away; it has no respect for geographical or statutory boundaries, and it usually gives no warning of its onslaught. Its successful prevention and control is a highly technical process which carries responsibilities of life and death.

"*The Health Act of 1900*" is not a legislative thunderbolt lying ready for the instant abolition, on occasion, of disease and insanitation. Its protective value depends in practice wholly upon the efficiency and adequacy of the means provided for its operation. These require money and time for development and organization, and cannot be hastily improvised in emergency.

I have, &c.,

J. S. C. ELKINGTON,

Commissioner of Public Health.

APPENDICES.

1. Report of the Health Officer.
2. Report of the Director, Laboratory of Microbiology and Pathology.
3. Report of the Government Analyst.
4. Classification of cases in Leper Lazaret, Peel Island.
5. Visits made by Inspecting Staff, 1910-11.
6. Rats and Mice destroyed and examined.
 - A. Metropolitan Area.
 - B. Outports.
7. Food stuffs destroyed as unfit for human consumption.
8. Food samples taken for analysis.
9. Prosecutions for milk adulteration.
10. Prosecutions for light-weight bread.
11. Prosecutions for spitting on footpaths.
12. Infectious Disease and deaths from Phthisis notified by Medical Practitioners in State, 1910-11.
13. Distribution of cases of Infectious Diseases notified from Brisbane Metropolitan Area, 1910-11.

APPENDIX 1.

REPORT OF THE HEALTH OFFICER.

Department of Public Health, Queensland.
Brisbane, 13th July, 1911.

SIR,—I have the honour to submit my report for the year ending 30th June, 1911, during the last five months of which I acted as Deputy Commissioner of Public Health in your absence.

METROPOLITAN AREA.

A good deal of attention has been paid to the sewers of the city. Both inspectors and myself have on many occasions gone down into and inspected the most important.

The smoke testing apparatus has been regularly used in drain testing and rat destruction, which has been assiduously carried out.

Repairs to Colmslie have been recommended and the tents overhauled. When finished, sets of poles, &c., will be needed, as rough poles used to be cut from the scrub when needed.

The constitution of the Water and Sewerage Board has handicapped to some extent the Department's efforts, as most local authorities are averse from spending money on improvements, which may be useless when the Board's scheme is completed; nevertheless, several old-standing defects have been remedied.

The reconstruction of one of the theatres has improved one of the most insanitary premises in the city, the lessees complying with the requirements of the Department.

The erection of many new and substantial buildings has reduced the rat warrens, and, if present prosperity continues, many other dilapidated premises will be replaced with modern structures. However, if pressure from the Department and City Inspectors be at all relaxed, residents tend to relapse into the slovenliness of former years.

An investigation into the bacterial content and conditions of making ice-cream, begun last

year, was continued. As far as it went it confirmed previous results that most of the contamination occurs before the milk reaches the maker.

PLAGUE.

Only one case was reported, which was clinically very suspicious though mild; however, smears, cultures, and inoculations gave negative results. No infected rats were found; the total metropolitan catch for the year of rats and mice was 38,893. There was no other suspect and no infected rats in the State.

In plague times the rat gang for some years had a ration of sulphur, intended to make them distasteful to fleas. I have had evidence of its efficacy on single persons, but this year a controlled trial was made which is worth recording. A resident consulted me as to how to free his premises from fleas, which made his children's lives unbearable. I suggested a teaspoonful of sulphur in jam daily, and he gave that ration to one-half the family only, with almost immediate freedom from fleas. I regret having forgotten from whom I got the idea.

SCARLATINA.

An extensive outbreak occurred in the metropolitan area, the first case being in Leiehardt Street State School on 18th July, 1910.

Cases were still occurring at the close of the period. In all there were 398, of whom 289 were school children. Many were so mild that an albuminuria was the first indication. The spread seems largely due to such cases. Milk as a route can be excluded.

Incidence was very capricious—i.e., the first school case was at Leiehardt Street School, 18th July, 1910; the second on 28th July at West End School, about 2 miles away and across the river; the next at St. Bridget's, Red Hill, and so on. The spread does not seem due to school contact, except, perhaps, in one or two schools towards the end, for many schools had two or three

attacks separated by sometimes three and even six months, each usually affecting two or three pupils. Several inspections were made, and many "peelers" found and excluded.

PLACES INSPECTED.

Belmont.—Accompanied by the Chief Inspector, all the slaughter works and woolseours on the course of Doughboy Creek were inspected in connection with the pollution of the stream.

Bundamba.—A proposed sanitary site was inspected, but not being satisfactory the Council were advised to select another, with the result that a more suitable one was selected.

Forest Hill.—This place was visited in company with the Chief Inspector, and advice given regarding the drainage of the township.

Ipswich.—Several visits were made in connection with the selection of a new sanitary depôt, which resulted in the approval of the Commissioner being given to a satisfactory site. A visit was also made to inspect a proposed site for the Joint Board's Infectious Diseases Hospital. Several other possible sites were inspected, with the result that approval has been withheld until a more suitable place has been found.

Maryborough.—This place was twice visited. In company with the Government Medical Officer, the rat depôt—i.e., plague hospital and quarters were inspected, after which it was recommended that the repairs outlined by the Works Department be carried out.

The second visit was to inquire into certain departmental matters; also to inspect the local sanitary depôt, the public baths, and the course of the main sewer of the city.

Toowoomba.—A visit was made in January to inquire into some cases of typhoid thought to be milk-borne. There was nothing, however, to implicate any dairy.

QUARANTINE.

During the past five months, owing to the absence of the Chief Quarantine Officer, I have

filled the position. The only unusual event was the surveillance of a passenger from the s.s. "Mooltan," on which cases of smallpox had occurred. Accompanied by the Minister, a visit of inspection was paid to the lazaret. A second was made consequent on the segregation of three patients at a camp outside the lazaret for six months observation preparatory to discharge as cured. The secretary, Mr. Mellish, and myself, visited the isolation camp where two other patients are now being segregated. Afterwards I crossed over to Dunwich and examined a suspect case of leprosy there, Mr. Mellish in the meantime making himself familiar with the surroundings of the lazaret as well as the conditions of admission of visitors.

FUMIGATION.

Plans were prepared for a fumigation building to include bathroom, bedroom, &c., for Pinkenba, which met with the approval of the Director of Quarantine, but through a probable change in berthing arrangements of oversea liners erection has been delayed.

Authority has been obtained from the Harbour Board, Cairns, for the erection of a disinfecting chamber at the end of the pilot jetty. The Federal Minister has approved of its erection. The erection of a similar shed at Townsville is under consideration.

A trial is being given of an apparatus devised by Dr. Roberts, of the United States Public Health Service, which promises to replace with advantage the present "pot" method of fumigating.

VACCINATION.

Several nurses on the roster for quarantine work have been vaccinated, but the majority have not found an opportunity. New appointees to the staff and to the rat gang are vaccinated as opportunity offers.

I have, &c.,

F. W. WOOLRABE, Health Officer.

The Commissioner of Public Health, Brisbane.

APPENDIX 2.

REPORT OF THE DIRECTOR, LABORATORY OF MICROBIOLOGY AND PATHOLOGY.

Laboratory of Microbiology and Pathology,
Brisbane, 5th July, 1911.

SIR,—I have the honour to submit the following report on the work done at this Institute in connection with the Department of Public Health, during the year ending 30th June, 1911:—

PLAGUE (HUMAN).—During the year only two specimens of suspected plague material were examined, with negative results, no plague bacilli being detected. Subsequent culture and guinea-pig inoculation tests confirmed the microscopic results.

PLAGUE (RODENT).—28,066 rats and 2,479 mice were examined; none were found infected. From the Health staff at Mackay smears from the spleen substance of 1,510 rats were received, and after staining and microscopic examination, none were found infected.

TUBERCULOSIS.—328 specimens of sputum were examined for the presence of the tubercle bacillus; of these the tubercle bacillus was found present in 109, and was not found in 219. Nine specimens of urine and five of pus were also examined with negative results.

TYPHOID FEVER.—143 specimens of blood from cases of suspected typhoid fever were examined by Widal's agglutination test. In 54 the

test was positive, in 89 negative. Specimens of milk (1), urine (6), water (23), and faeces (1), were examined for the presence of the *B. Typhosus*, but in no specimen was it found.

LEPROSY.—Serum from 20 cases of suspected leprosy was examined for the leprosy bacillus. In 11 of these it was found present.

PATHOLOGICAL TISSUES.—Tissues to the number of 149 were submitted for diagnosis. After being sectioned and stained in the Institute, most of those were submitted to Dr. Wilton Love, the Honorary Pathologist, for diagnosis.

VACCINES.—Autogenous vaccines to the number of 22 were prepared during the year for medical practitioners. The results, as far as could be ascertained, were most encouraging, and it is disapopinting that medical men do not take more advantage of the facilities offered by the Institute in this department.

DIPHTHERIA.—Ninety-nine (99) swabbings from suspected diphtheritic throats, &c., were examined, and the bacillus was found present in 10.

GENERAL BACTERIOLOGY.—A number of specimens of water, milk, cream, and foodstuffs—as ice-cream, custard, preserved fish, and meat—were examined baeteriologically as to the number and variety of baeteria present. In addition, a few specimens of pathological fluids and semi-fluids, such as urine, pus, serum, blood, cerebro-spinal fluid, and faeces were also examined clinically and bacteriologically. A small amount of work was also done with disinfectants and deodorants. Specimens of blood were examined for malaria and micro-filariæ, and a small amount of work was done in clinieal blood examinations.

In eonclusion, I antieipate that for the year 1911-12 the work done will show a large increase in volume, especially in the preparation of vaccines and the examination of nose and throat swabs for the diphtheria bacillus.

I have, &c.,
JOHN J. HARRIS, Director.

The Commissioner of Public Health, Brisbane.

Table giving particulars of specimens examined at Laboratory of Microbiology during year ended 30th July, 1911:—

Suspected Disease.	SPECIMEN.		Positive.	Negative.
	Nature of.	Number.		
Plague ...	Rats	28,066	...	28,066
	Mice	2,479	...	2,479
	Mackay Smears ...	1,510	...	1,510
	Lymph	1	...	1
	Blood and Gland ...	1	...	1
Tuberculosis ...	Sputum	328	109	219
	Urine	9	...	9
	Pus	5	...	5
Typhoid ...	Blood	143	54	89
	Milk	1	...	1
	Urine	6	...	6
	Water	23	...	23
	Fæces	1	...	1
Malaria ...	Blood	4	1	3
Filaria ...	Blood	2	...	2
Diphtheria ...	Throat swabbings ...	99	10	89
Leprosy ...	Serum	20	11	9
Gonorrhœa ...	Pus	21	5	16
Ankylostoma ...	Fæces	3	...	3
Septicæmia ...	Viscera	1	...	1
Cerebro-spinal Meningitis	C. S. Fluid	1	...	1
Pneumonia ...	Sputum	1	1	...
Anæmia ...	Blood-smear	1	...	1
Chyluria ...	Urine	1	1	...
Ptomaine ...	Fæces	2	...	2
Hydatid ...	Urine	1	...	1
Malignancy ...	Tissues	149	...	...
Miscellaneous—	Water, general exam.	11	...	...
	Urine " "	26	...	...
	Urine, for colon bac.	1	...	...
	Pus, for bacteria ...	2	...	...
	Cerebro-spinal fluid, for bac.	1	...	...
	Serum from leg, for bacteria	1	...	...
	Fæces, for bacteria	1	...	...
	Blood " "	3	...	...
	Ling Fish " "	2	...	...
	Discharge " "	1	...	...
	Preserved Meat, for bacteria	1	...	...
	Autogenous Vaccine, for bacteria	1	...	...
	Ice-cream, Milk, Custard and Cream	13	...	...
	Mist Odor Pnrifier	1	...	...
	Cyllin and M. O. H. Disinfectants	2	...	...
	Cultures from Reck Disinfectior	21	...	...
	Vaccine, from sputum	4	...	...
	Vaccine, from mucus	1	...	...
	Vaccine, from vag. discharge	1	...	...
	Vaccine, from pus	14	...	...
	Vaccine, from knee-joint fluid	1	...	...
	Vaccine, from urine	1	...	...
Total		32,989		

JOHN J. HARRIS, Director.

APPENDIX 3.

REPORT OF THE GOVERNMENT ANALYST.

Government Chemical Laboratory,
Brisbane, 4th August, 1911.

SIR,—I have the honour, in aecordanee with section 31 of “*The Health Act of 1900*,” to submit the following report of work done in the Government Chemical Laboratory for the Health Department during the year 1910-11:—

The number of samples received from your Department during the year was 462, involving 2,827 determinations. This was a decrease of 97 samples compared with the previous year. The priniepal decrease was in miscellaneous samples of food, the most important food product which is much adulterated (milk), however, showing an increase of 44 samples.

The following is a summary of the work done during the year:—

Name of Sample.	Number.	Determinations.
Brandy	1	12
Bread	12	24
Beverages and Cordials	9	82
Cream	2	8
Cream of Tartar	135	405
Cattle Dip	1	6
Disinfectant	4	42
Fish (tinned)	5	27
Flour	1	6
Ice-cream	6	72
Milk (fresh)	205	1,453
Milk (condensed)	24	210
Miscellaneous	5	54
Paint	1	4
Paste	1	6
Pickles	5	60
Peas (tinned)	1	6
Potted Meats	5	60
Sewage	17	34
Vinegar	1	6
Water	17	221
Water Weed	1	1
Whisky	1	4
Wine	2	24
	462	2,827

Altogether 205 samples of milk were examined during the year, and of that number 122 were samples taken by health inspectors under the provisions of the Health Act; 28 of these legal samples failed, equivalent to 23 per cent. of the samples. The average added water in the adulterated samples was 7.9 per cent. Mr. Thornhill Weedon, Government Statistician, estimates the annual consumption of milk in Brisbane and suburbs at approximately 2,000,000 gallons. With the above figures; and taking it for granted that the supply is no worse than is indicated by the inspectors' samples (which assumes that refusals to sell milk and other evasions of inspectors do not indicate watered milk), and that the average retail price of milk is 4d. per quart, then 36,340 gallons of water have been sold at 4d. per quart, equivalent to over £2,400 paid for water. As many of the dairies are on creeks and have not a pure water supply, probably that amount is paid for dirty and dangerous water. As the fines imposed for milk adulteration during the year amounted only to £100, it plainly still pays those dairymen who are dishonest to water milk and risk the fine. The following table shows that there is a slight improvement going on in the quality of the milk supply:—

Year.	Milk Samples.		Per Cent. Failed.	Average of Added Water.
	Total.	Failed.		
1907-1908 ...	66	37	56	8.7
1908-1909 ...	158	64	40	10.0
1909-1910 ...	78	19	24	8.3
1910-1911 ...	122	28	23	7.9

Prosecutions.	Fines.	Costs.	Total.
1910-1911.	£	£ s. d.	£ s. d.
13 (Adulteration)	92	23 18 2	115 18 2
3 (Refusing to Sell)	8	10 13 2	18 13 2
Totals 16	£100	£34 11 4	£134 11 4

The proportion of added water found in samples varied from 2 per cent. to 32.4 per cent. In all cases the presence of added water was confirmed by the freezing-point test, and the value of this test as a protection to the dairyman as well as to the public was shown by the fact that two

samples were shown by it to be genuine although slightly below the legal standard for solids not fat. It is noteworthy that the milk in Brisbane is richer in butter-fat than it generally is elsewhere. The average fat contents of samples not adulterated was found to be 4.1 per cent. The class of milk which can be supplied is shown by the results of analysis of samples of milk from the Lady Chelmsford Milk Institute. Twenty-five samples of the morning milk and 28 samples of the afternoon milk were tested. The average composition was as follows:—

—	Mornings.	Afternoons.	Queensland Legal Standard.
Solids not fat ...	9.3	9.40	8.5
Solids fat ...	4.80	5.30	3.0

Twenty-four samples of condensed milk were examined, 6 of these being legal samples, all of which were passed. Of the other 18 samples, 10 gave 9.1 to 9.9, respectively, the remainder being over 10 per cent. butter-fat.

Six samples of ice-cream were received. Ice-cream, according to the regulations, should contain at least 8 per cent. of butter-fat, but these samples only contained from 3.9 per cent. to 5.3 per cent. of butter-fat.

Of 135 samples of cream of tartar examined only 1 failed, and that gave 93.6 per cent. The fixing of this standard at 95 per cent., and the strict administration of the standard, has evidently put inferior cream of tartars off the Queensland market.

Twelve samples of bread examined were all good, the moisture contents varying from 41.7 to 44.7, with an average of 43.6 per cent.

Of 5 samples of tinned fish 3 were “blown” tins of sardines, the other two samples being good.

Nine samples of beverages were examined and one, a lemonade, was free from preservative. A “ships’ lime juicella” was a solution of tartaric acid flavoured with oil of limes and preserved with a sulphite. A raspberry vinegar had 3 grains sulphites per pint. Two lemon syrups had each 3 grains of salicylic acid per pint and 1 of raspberry syrup had 1.8 grains of salicylic acid per pint.

Of 4 disinfectants tested, 1 was worthless, 1 was good formalin, 1 was sodium sulphite, and the other was a mixture of sodium sulphite and cane sugar.

All the other food samples mentioned in the summary were found fit for human consumption.

During the year I found the difficulty of closely supervising every legal analysis become greater than ever. To overcome possible objections to my giving evidence on work not closely and continuously supervised, Mr. L. A. Meston, who has been doing the work for the Health Department for a considerable time, was gazetted as a State Analyst under section 24 of the Health Act. He can thus give evidence on his own work. To save two witnesses appearing, Mr. Meston receives all samples and signs all certificates, although I, of course, still supervise and am responsible for all work.

I have, &c.,
J. BROWNLIE HENDERSON,
State Analyst.

The Commissioner of Public Health, Brisbane.

APPENDIX 4.

CLASSIFICATION OF CASES IN THE LEPER LAZARET, PEEL ISLAND, DURING THE YEAR ENDING 30TH JUNE, 1911.

No.	Sex.	Age.	Nationality.	Occupation.	Form.	Assigned Place of Residence.	Date of Segregation.	Dead.	Remain- ing.
1	Male	26	Queenslander	Nil	Nodular	Charters Towers...	22-9-1898	...	1
2	Female	18	ditto	Nil	Tuberculo anæsthetic	Townsville	6-6-02	...	1
3	Male	44	Aboriginal	Stockman	Anæsthetic	Boulia Downs	22-10-03	...	1
4	Male	76	English	Bullock-driver...	Tuberculo anæsthetic	Brisbane	21-11-03	...	1
5	Male	31	Queenslander	Farmer...	Nodular	Mungar, near Maryborough	23-12-03	...	1
6	Female	46	New South Wales	Domestic duties	ditto	Mackay	13-4-04	...	1
7	Male	51	Kanaka	Labourer	Tuberculo anæsthetic	Mount Cotton	22-7-04	1	
8	Male	31	Half-caste aboriginal	ditto	ditto	Myora	4-10-04	...	1
9	Male	36	Queenslander	Shearer...	Anæsthetic	Amby Downs	7-11-04	...	1
10	Male	34	Kanaka	Plantation hand	Tuberculo anæsthetic	Bundaberg	8-9-05	...	1
11	Male	34	ditto	ditto	Nodular	ditto	8-9-05	...	1
12	Male	51	ditto	ditto	ditto	ditto	18-10-05	1	
13	Male	66	Italian	Tobacco planter	Anæsthetic	Cairns	1-3-06	...	1
14	Male	33	Kanaka	Plantation hand	Tuberculo anæsthetic	Mackay	1-3-06	1	
15	Male	39	Chinese	ditto	Nodular	Ayr	1-3-06	...	1
16	Male	48	Cingalese	ditto	Tuberculo anæsthetic	Cairns	1-3-06	...	1
17	Male	20	Queenslander	Nil	Nodular	Croydon	8-5-06	...	1
18	Male	50	German	Blacksmith	Anæsthetic	Brisbane	11-6-06	...	1
19	Male	41	Kanaka	Labourer	Tuberculo anæsthetic	Bundaberg	26-7-06	...	1
20	Male	70	Chinese	ditto	ditto	Rockhampton	3-11-06	...	1
21	Male	33	Kanaka	Plantation hand	Nodular	Bundaberg	16-11-06	...	1
22	Male	26	ditto	ditto	ditto	ditto	21-1-07	...	1
23	Male	30	ditto	ditto	ditto	Johnstone River	21-1-07	...	1
24	Male	36	Aboriginal	Labourer	Anæsthetic	Geraldton	19-3-96	...	1
25	Male	34	Kanaka	ditto	Tuberculo anæsthetic	Mackay	2-6-99	...	1
26	Male	46	ditto	Farmer	Anæsthetic	ditto	7-2-00	...	1
27	Female	29	Half-caste aboriginal	Domestic duties	ditto	ditto	7-2-00	1	
28	Male	51	Kanaka	Labourer	Tuberculo anæsthetic	Townsville	15-5-03	...	1
29	Male	48	ditto	ditto	ditto	ditto	15-5-03	...	1
30	Male	42	ditto	Plantation hand	ditto	Johnstone River	5-2-04	...	1
31	Male	41	ditto	ditto	ditto	Nelson (Q.)	23-11-04	1	
32	Male	53	ditto	ditto	Nodular	Cairns	23-11-04	1	
33	Female	39	ditto	Farm hand	ditto	Childers	23-11-04	...	1
34	Male	42	ditto	Plantation hand	ditto	Johnstone River	10-4-05	...	1
35	Male	30	Queenslander	Stockman	ditto	Cooktown	24-7-07	...	1
36	Male	23	ditto	Farmer	ditto	Cairns	24-7-07	...	1
37	Female	17	ditto	Nil	ditto	Charters Towers	24-7-07	...	1
38	Female	26	ditto	Nil	ditto	ditto	24-7-07	...	1
39	Male	36	Kanaka	Plantation hand	ditto	Cairns	24-7-07	1	
40	Male	44	ditto	ditto	Tuberculo anæsthetic	ditto	24-7-07	1	
41	Male	39	ditto	ditto	Nodular	Johnstone River	24-7-07	1	
42	Male	34	ditto	ditto	Tuberculo anæsthetic	Herbert River	24-7-07	1	
43	Male	44	ditto	ditto	Nodular	Cairns	24-7-07	...	1
44	Male	44	ditto	ditto	Tuberculo anæsthetic	Burdekin River	24-7-07	...	1
45	Male	49	ditto	ditto	Nodular	Halifax	24-7-07	...	1
46	Male	44	ditto	Labourer	Tuberculo anæsthetic	Cairns	24-7-07	1	
47	Male	60	ditto	ditto	Nodular	Townsville	24-7-07	1	
48	Male	40	Queenslander	Tailor	ditto	Brisbane	12-8-07	...	1
49	Male	31	Kanaka	Labourer	Tuberculo anæsthetic	Mackay	10-1-08	1	
50	Male	41	English	Farmer	ditto	Nambour	11-3-08	...	1
51	Male	15	Queenslander	Schoolboy	ditto	Brisbane	1-4-08	...	1
52	Male	41	Kanaka	Labourer	ditto	Buderim Mountain, Nambour	30-7-08	...	1
53	Female	61	Scotch	Domestic duties	ditto	Rockhampton	8-8-08	...	1
54	Male	26	Half-caste aboriginal	Labourer	ditto	Barambah	8-8-08	...	1
55	Male	25	Half-caste kanaka	Stockman	Nodular	Duaringa	30-10-08	...	1
56	Male	39	Queenslander	Barman	Tuberculo anæsthetic	Gilliat, N. Queensland	10-12-08	...	1
57	Male	43	Kanaka	Labourer	Nodular	Mackay	10-12-08	...	1
58	Male	41	Japanese	ditto	Tuberculo anæsthetic	Proserpine	10-12-08	...	1
59	Male	31	Chinese	Gardener	ditto	Tully River	10-12-08	...	1
60	Male	39	Aboriginal	Nil	ditto	Ducia River	10-12-08	1	
61	Male	43	ditto	Nil	ditto	ditto	10-12-08	...	1
62	Male	41	ditto	Nil	Anæsthetic	Cape York Peninsular	10-12-08	...	1
63	Male	26	ditto	Nil	Tuberculo anæsthetic	ditto	10-12-08	...	1
64	Male	26	ditto	Nil	Nodular	Daintree River	10-12-08	...	1
65	Male	26	ditto	Nil	Anæsthetic	Cape York Peninsular	10-12-08	...	1
66	Female	38	ditto	Domestic duties	Tuberculo anæsthetic	Moreton Telegraph Station	10-12-08	...	1
67	Female	31	ditto	Nil	ditto	ditto	10-12-08	...	1
68	Female	26	ditto	Nil	ditto	Jardine River	10-12-08	...	1
69	Female	41	ditto	Nil	ditto	Cape York Peninsular	10-12-08	...	1
70	Female	43	ditto	Nil	ditto	ditto	10-12-08	...	1
71	Male	46	Kanaka	Labourer	ditto	Bundaberg	8-4-9	1	
72	Male	42	Queenslander	ditto	Nodular	Mount Morgan	6-5-9	1	
73	Male	51	Kanaka	ditto	Tuberculo anæsthetic	Cairns	17-9-9	...	1
74	Male	36	Queenslander	ditto	ditto	Normanton	21-12-9	...	1
75	Male	12	Half-caste aboriginal	Nil	ditto	Southport	24-2-10	...	1
76	Male	12	ditto	Nil	ditto	ditto	24-2-10	...	1
77	Male	30	ditto	Labourer	ditto	Eidsvold	23-3-10	...	1
78	Male	33	Aboriginal	ditto	ditto	Cairns	17-4-10	...	1
79	Male	12	Queenslander	Schoolboy	Nodular	South Brisbane	8-7-10	...	1
80	Male	*35	Kanaka	Labourer	Tuberculo anæsthetic	Nambour	18-9-10	...	1
81	Female	21	Queenslander	Tailoress	ditto	Mackay	27-3-11	...	1
82	Male	20	ditto	Nil	ditto	Rockhampton	13-4-11	...	1
83	Male	*50	Kanaka	Labourer	ditto	Mackay	25-5-11	...	1
84	Male	15	Queenslander	Schoolboy	ditto	Dunwich	8-6-11	...	1
85	Male	50	New South Wales	Farmer	ditto	Crow's Nest	20-6-11	...	1

* About,

At present in Lazaret, 69.

APPENDIX 5.

VISIT BY INSPECTING STAFF.

Date.	Place.	Inspector.	Purpose of Visit.
18 November, 1910 ...	Ayr ...	S. Dudley ...	Sanitary survey.
29-31 October, 1910 ...	Atherton ...	S. Dudley ...	Sanitary survey.
26 September, 1910 ...	Brisbane North ...	J. Simpson ...	Sanitary survey.
27 September, 1910 ...	Brisbane South ...	J. Simpson ...	Sanitary survey.
9 March, 1911 ...	Bundamba ...	J. Simpson ...	Inspection sanitary depôt.
8 September, 1911 ...	Bundamba ...	J. Simpson ...	Sanitary survey.
30 January, 1911 ...	Barolin ...	J. Simpson ...	Sanitary survey and house-to-house inspection.
20 November, 1910 ...	Brandon ...	S. Dudley ...	Sanitary survey.
27-8 September, 1910 ...	Beaudesert ...	F. Daniel ...	Sanitary survey and food inspection.
9 November, 1910 ...	Beaudesert ...	F. Daniel ...	Bread prosecutions.
4 August, 1910 ...	Baree ...	J. Simpson ...	Sanitary inspection.
26 May, 1911 ...	Belmont ...	C. M. Cato ...	Sanitary survey.
5-6 August, 1910 ...	Boonah ...	F. Daniel ...	Inspection sanitary depôt.
27 July, 1910 ...	Bowen ...	J. Simpson ...	With C.P.H. ; sanitary survey and house-to-house inspection.
20-1 December, 1910 ...	Bowen ...	J. Simpson ...	Reinspections, sanitary.
28 March, 1911 ...	Balmoral ...	J. Simpson ...	Sanitary survey.
8 September, 1910 ...	Brassall ...	J. Simpson ...	Sanitary survey.
7 November, 1910 ...	Cloncurry ...	J. Simpson ...	Further inspection, sanitary survey and Sanitary Depôt.
15 May, 1911 ...	Cleveland ...	C. M. Cato ...	Sanitary survey.
19 July, 1910 ...	Charters Towers ...	J. Simpson ...	With C.P.H. ; sanitary survey, sanitary inspection and inquiry into rat infestation of mines.
15 December, 1910 ...	Charters Towers ...	J. Simpson ...	Reinspection.
12-13 October, 1910 ...	Croydon ...	S. Dudley ...	Sanitary survey.
14 March, 1911 ...	Coorparoo ...	J. Simpson ...	Sanitary survey.
12-15 January, 1911 ...	Cunnamulla ...	S. Dudley ...	Sanitary survey.
16-18 January, 1911 ...	Charleville ...	S. Dudley ...	Sanitary survey.
26-7 January, 1911 ...	Chinehilla ...	S. Dudley ...	Sanitary survey.
28-9 September, 1910 ...	Charleston ...	S. Dudley ...	Sanitary survey.
19 October, 1910 ...	Chillagoe ...	S. Dudley ...	Sanitary survey.
9 November, 1910 ...	Cooktown ...	S. Dudley ...	Sanitary survey.
4-6 November, 1910 ...	Cairns ...	S. Dudley ...	Special inquiry into sanitary loan, rat infestation.
15-16 November, 1910 ...	Cairns ...	S. Dudley ...	Inquiry into rat infestation in the canefields.
28-30 January, 1911 ...	Dalby ...	S. Dudley ...	Sanitary survey.
26 April, 1911 ...	Enoggera ...	J. Simpson ...	Sanitary survey.
26-7 September, 1910 ...	Einasleigh ...	S. Dudley ...	Sanitary survey.
24 March, 1911 ...	Forest Hill ...	J. Simpson ...	With D.C.P.H., drainage inspection.
4-5 November, 1910 ...	Friezland ...	J. Simpson ...	Sanitary survey.
9 October, 1910 ...	Goodna ...	W. G. Wilson ...	Inspection sanitary depôt and house to house.
15 August, 1910 ...	Gympie ...	J. Simpson ...	Sanitary inspection.
1 February, 1911 ...	Gooburrum ...	J. Simpson ...	Sanitary survey.
30 September to 4 October, 1910	Georgetown ...	S. Dudley ...	Sanitary survey.
25-6 October, 1910 ...	Herberton ...	S. Dudley ...	Sanitary survey.
12 May, 1911 ...	Harrisville ...	C. M. Cato ...	Inspection slaughter-yard.
13 December, 1910 ...	Hughenden ...	J. Simpson ...	Further inspection sanitary survey.
23-5 November, 1910 ...	Homebush ...	S. Dudley ...	Special inquiry into typhoid fever outbreak.
5 May, 1911 ...	Helidon ...	S. Dudley ...	Bread-weighing.
5 May, 1911 ...	Helidon ...	C. W. Beaver ...	Bread-weighing.
15 June, 1911 ...	Helidon ...	S. Dudley ...	Prosecution, light-weight bread.
25 February, 1911 ...	Hamilton ...	J. Simpson ...	Sanitary survey.
2-3 February, 1911 ...	Inglewood ...	S. Dudley ...	Special inquiry into typhoid fever outbreak.
20 October, 1910 ...	Ithaea ...	J. Simpson ...	Sanitary survey.
7 July, 1910 ...	Ipswich ...	A. J. Lewis ...	Taking samples from septic tank for analysis.
23 February, 1911 ...	Ipswich ...	J. Simpson ...	With D.C.P.H., inspection proposed hospital sites, and samples of effluent from septic tank for analysis.
24 March, 1911 ...	Ipswich ...	J. Simpson ...	With D.C.P.H. ; inspection hospital sites.
20 April, 1911 ...	Indooroopilly ...	J. Simpson ...	For information for sanitary survey.
23-4 September, 1910 ...	Kidston (Oaks Rush) ...	S. Dudley ...	Sanitary survey.
27 April, 1911 ...	Kedron ...	J. Simpson ...	Sanitary survey.
15 September, 1910 ...	Kingsborough ...	S. Dudley ...	Sanitary survey.
3 November, 1910 ...	Kuranda ...	S. Dudley ...	Sanitary survey.
8 August, 1910 ...	Marmor ...	J. Simpson ...	With C.P.H. ; house-to-house inspection.
10 November, 1910 ...	Maekinlay ...	J. Simpson ...	Sanitary survey.
10-11 November, 1910 ...	Mossman ...	S. Dudley ...	Sanitary survey.
18 October, 1910 ...	Mungana ...	S. Dudley ...	Sanitary survey.
4 April, 1911 ...	Miles ...	S. Dudley ...	Bakers.
4 April, 1911 ...	Miles ...	C. W. Beaver ...	Bakers.
1-2 November, 1910 ...	Mareeba ...	S. Dudley ...	Sanitary survey.
21-2 January, 1911 ...	Mitchell ...	S. Dudley ...	Sanitary survey.
18 September, 1910 ...	Mount Molloy ...	S. Dudley ...	Sanitary survey.
19-20 September, 1910 ...	Mount Carbine ...	S. Dudley ...	Sanitary survey.
10 August, 1910 ...	Mount Chalmers ...	J. Simpson ...	Sanitary survey.
30 July, 1910 ...	Mackay ...	J. Simpson ...	With C.P.H. ; detailed sanitary house-to-house inspection.
4 August, 1910 ...	Mount Morgan ...	J. Simpson ...	With C.P.H. ; sanitary inspections.
17 October, 1910 ...	Mount Cotton ...	F. Daniel ...	Disinfection for leprosy.
7-10 October, 1910 ...	Normanton ...	S. Dudley ...	Sanitary survey.
13 August, 1910 ...	Many Peaks ...	J. Simpson ...	Sanitary survey ; house-to-house inspection.
3 February, 1911 ...	Pialba ...	J. Simpson ...	Sanitary survey ; house-to-house inspection.

APPENDIX 5—continued.

VISITS MADE BY INSPECTING STAFF—continued.

Date.	Place.	Inspector.	Purpose of Visit.
8 September, 1910	Purga	J. Simpson	Sanitary survey and general inspection.
28 July, 1910	Proserpine	J. Simpson	Sanitary survey and house-to-house inspection.
22 December, 1910	Proserpine	J. Simpson	Further inspection typhoid fever outbreak.
12 November, 1910	Port Douglas	S. Dudley	Sanitary survey.
20 July, 1910	Queenton	J. Simpson	With C.P.H. ; sanitary survey.
22-5 January, 1911	Roma	S. Dudley	Further inspection, sanitary survey.
11 December, 1910	Richmond	J. Simpson	Sanitary survey, house-to-house inspection.
1-2 December, 1910	Rockhampton	S. Dudley	For Nancee fumigating machine.
3 November, 1910	Selwyn	J. Simpson	Sanitary inspection, house-to-house, and special cleansing crusade, typhoid fever outbreak
26-7 November, 1910	Sarina	S. Dudley	Further inspection sanitary survey.
1 August, 1910	Sarina	J. Simpson	Sanitary survey ; house-to-house inspection.
16 March, 1911	Stephens	J. Simpson	Sanitary survey.
24 October, 1910	Stannary Hills	S. Dudley	Sanitary survey.
25 October, 1910	Southport	F. Daniel	Laying information re bread prosecutions.
3-4 November, 1910	Southport	F. Daniel	Bread prosecutions.
30 September, 1910	Southport	F. Daniel	Sanitary survey and bread-weighing.
1 September, 1910	Sherwood	J. Simpson	Sanitary survey.
8 September, 1910	Sherwood	C. M. Cato	Sanitary depôt.
16 December, 1910	Townsville	J. Simpson	Further sanitary inspection.
17 December, 1910	Thuringowa	J. Simpson	Further sanitary inspection.
28 November, 1910	Tolga	S. Dudley	Sanitary survey.
14 September, 1910	Thornborough	S. Dudley	Sanitary survey.
11 April, 1911	Toombul	J. Simpson	Sanitary survey.
8 May, 1911	Toowong	C. M. Cato	Sanitary survey.
16 January, 1911	Taringa	J. Simpson	Sanitary survey.
1 May, 1911	Toowoomba	S. Dudley	Bread-weighing.
1 May, 1911	Toowoomba	C. W. Beaver	Bread-weighing.
13-14 June, 1911	Toowoomba	S. Dudley	Prosecutions re light-weight bread.
13-14 June, 1911	Toowoomba	C. W. Beaver	Prosecutions re short-weight bread.
28 January, 1911	Woongarra	J. Simpson	Survey sanitary area.
16 September, 1910	Woolfram Camp	S. Dudley	Sanitary survey.
27 April, 1911	Wetalla	S. Dudley	Disinfection, State school.
29 September, 1910	Yatala	F. Daniel	Food inspection.

1,666 visits of Inspectors have been made within the Metropolitan Area, sanitary defects have been noted, and the Local Authorities concerned have been notified.

As the results of these visits of inspection and reinspection numerous active nuisances have been rectified, but some of the Local Authorities are slow to take action.

APPENDIX 6.

A.—NUMBER OF RATS AND MICE CAUGHT OR COLLECTED AND EXAMINED, BRISBANE METROPOLITAN AREA, 1ST JULY, 1910, TO 30TH JUNE, 1911.

Month.	DESTROYED.			SUBMITTED FOR EXAMINATION.			SPECIES.		
	Rats.	Mice.	Total.	Rats.	Mice.	Total.	*M.D.	*M.R.	*M.A.R.
July	2,177	342	2,519	1,781	335	2,116	980	309	491 also 1 water rat
August	2,240	218	2,458	1,823	201	2,024	1,245	251	326 „ 1 „ „
September	2,128	217	2,345	1,730	207	1,937	1,255	172	302 „ 1 „ „
October	4,163	275	4,438	3,437	235	3,672	2,794	290	352 „ 1 „ „
November	2,951	155	3,106	1,967	143	2,110	1,573	120	272 „ 2 „ „
December	3,013	171	3,184	2,234	154	2,388	1,276	281	675 „ 2 „ „
January	3,318	270	3,588	2,665	167	2,832	2,001	490	172 „ 2 „ „
February	2,651	223	2,874	2,201	219	2,420	1,762	188	250 „ 1 „ „
March	4,647	203	4,850	2,502	203	2,705	1,817	354	331 „ 1 „ „
April	3,012	248	3,260	2,447	141	2,588	1,963	197	284 „ 3 „ „
May	3,321	196	3,517	2,641	196	2,837	1,890	220	531 „ 1 „ „
June	2,524	230	2,754	1,926	230	2,156	1,565	99	261 „ 1 „ „
GRAND TOTAL	36,145	2,748	38,893	27,354	2,431	29,785	20,121	2,971	4,247

* Mus decumanus, Mus rattus, and Mus alexandrinus rufus, respectively.

Date on which last infected rat from area was examined, 15th September, 1908.
Number of poisoned baits laid for year, 360,050.
Number of complaints of rat infestation receiving attention, 930.

APPENDIX 6—continued.

B.—NUMBER OF RATS AND MICE CAUGHT OR COLLECTED AND EXAMINED BY DEPARTMENT'S STAFF
AT OUT PORTS, 1ST JULY, 1910, TO 30TH JUNE, 1911.

1910-11.	DESTROYED.			EXAMINED.		
	Rats.	Mice.	Total.	Rats.	Mice.	Total.
MARYBOROUGH.						
July	216	22	238	216	22	238
August	631	81	712	631	81	712
September	387	105	492	387	105	492
October	445	101	546	445	101	546
November	491	106	597	491	106	597
December	224	40	264	224	40	264
January	399	70	469	399	70	469
February	355	41	396	355	41	396
March	542	60	602	542	60	602
April	223	52	275	223	52	275
May	248	41	289	248	41	289
June	208	37	245	208	37	245
TOTALS	4,369	756	5,125	4,369	756	5,125
BUNDABERG.						
July	395	11	406	95	1	96
August	566	52	618	110	3	113
September	334	16	350	54	3	57
October	339	35	374	76	2	78
November	338	27	265	52	1	53
December	319	13	332	44	...	44
January	574	8	582	163	1	164
February	390	22	412	75	4	79
March	544	12	556	155	1	156
April	425	21	446	62	3	65
May	427	44	471	110	9	119
June	427	23	450	97	4	101
TOTALS	5,078	284	5,362	1,093	32	1,125
GLADSTONE.						
July	8	32	40	...	...	...
August	21	99	50	...	...	...
TOTALS	29	131	90	...	...	...
BOWEN.						
September ... ..	...	...	...	199	...	199
October ... ..	...	...	...	258	...	258
November ... ..	...	...	...	169	...	169
December ... ..	...	...	...	102	...	102
TOTALS ... ..	...	...	...	728	...	728
ROCKHAMPTON.						
July	278	67	345	278	67	345
August	401	93	494	401	93	494
September	376	118	494	376	118	494
October	386	66	452	386	66	452
November	380	91	471	380	91	471
December	356	38	394	356	38	394
January	407	51	458	407	51	458
February	382	...	382	382	...	382
March	484	16	500	484	16	500
April	326	38	364	326	38	364
May	461	99	560	461	99	560
June	398	27	425	398	27	425
TOTALS	4,635	704	5,339	4,635	704	5,339
MACKAY.						
July	190	36	226	...	...	...
August	263	99	362	...	...	...
September	316	32	348	...	...	...
October	293	52	345	...	...	...
November	442	71	513	...	...	...
December	310	37	347	...	...	...
January	308	104	412	...	...	...
February	308	61	369	...	...	...
March	273	4	277	...	...	...
April	334	22	356	...	...	...
May	353	12	365	...	...	...
June	292	19	311	...	...	...
TOTALS	3,682	549	4,231	...	...	...

APPENDIX 6—continued.

B.—NUMBER OF RATS AND MICE CAUGHT, ETC.—continued.

1910-11.	DESTROYED.			EXAMINED.		
	Rats.	Mice.	Total.	Rats.	Mice.	Total.
TOWNSVILLE.						
July	366	11	377	166	8	174
August	569	29	598	279	17	296
September	612	17	629	326	8	334
October	383	51	434	175	26	201
November	536	26	562	269	15	284
December	387	26	413	162	8	170
January	725	54	779	326	26	352
February	571	44	615	301	24	325
March	516	52	568	234	27	261
April	468	52	520	217	22	239
May	498	45	543	257	21	278
June	403	32	435	224	18	242
TOTALS	6,034	439	6,473	2,936	220	3,156
CAIRNS.						
July	208	7	215	...	...	...
August	415	30	445	15	...	15
September	463	13	476	15	...	15
October	490	24	514	21	...	21
November	502	11	513	27	...	27
December	433	30	463	23	...	23
January	457	31	488	30	...	30
February	448	44	492	28	...	28
March	769	72	841	58	...	58
April	624	36	660	64	...	64
May	690	64	754	51	...	51
June	469	46	515	74	3	77
TOTALS	5,968	408	6,376	406	3	409

APPENDIX 7.

TOTAL FOODSTUFFS DESTROYED AS UNFIT FOR HUMAN CONSUMPTION—1ST JULY, 1910, TO 30TH JUNE, 1911.

Articles										Quantity.	Weight.
											Tons, cwt, qr. lb.
Apples	...	...	...	...	...	...	...	...	...	80 cases	2 3 2 0
Pears	...	...	...	...	...	...	...	...	...	484 „	11 9 2 0
Plums	...	...	...	...	...	...	...	...	...	341 „	3 14 0 16
Pineapples	...	...	...	...	...	...	...	...	...	8 bags and 8 doz.	0 10 3 6
Tomatoes	...	...	...	...	...	...	...	...	...	80 cases	0 14 1 4
Cabbage	...	...	...	...	...	...	...	...	...	41 bags	2 2 0 0
Jams	...	...	...	...	...	...	...	...	...	99 tins	0 1 1 3
Vegetables	...	...	...	...	...	...	...	...	...	8 „	0 0 0 16
Bananas	...	...	...	...	...	...	...	...	...	36 crates	10 16 0 0
Salt Cod Fish	...	...	...	...	...	...	...	...	...	5 boxes	0 1 1 0
Potatoes	...	...	...	...	...	...	...	...	...	946 bags	94 12 0 0
Turnips	...	...	...	...	...	...	...	...	...	7 „	0 14 0 0
Mandarin Oranges	...	...	...	...	...	...	...	...	...	24 cases	0 12 0 0
Pawpaw Apples	...	...	...	...	...	...	...	...	...	5 „	0 2 2 0
Bacon	...	...	...	...	...	...	...	...	...	2 sides	0 0 2 4
Oysters (tinned)	...	...	...	...	...	...	...	...	...	1 case	0 0 1 20
TOTAL										...	127 14 1 13

APPENDIX 8.

FOOD SAMPLES TAKEN FOR ANALYSIS, 1ST JULY, 1910, TO 30TH JUNE, 1911.

Number.	Article.	Numbers Taken.
1	Milk	122
2	Condensed Milk	5
3	Sardines	3
4	Syrups	2
5	Lemonade	2
6	Ice-creams	6
7	Disinfectant	1
	TOTAL	141

APPENDIX 9.

PROSECUTIONS FOR MILK ADULTERATION, FROM 1ST JULY, 1910, TO 30TH JUNE, 1911.

Place.						Reason of Prosecution.						Result.				Total Fine and Costs Allowed.			
1.	North Brisbane	...	...	...	...	10·6	per cent.	added	water	...	...	Fined	£	s.	d.	£	s.	d.	
2.	South Brisbane	...	...	...	...	4·2	"	"	"	...	...	"	5	0	0	12	5	6	
3.	North Brisbane	...	...	...	...	4·8	"	"	"	...	...	"	5	0	0	5	10	4	
4.	South Brisbane	...	...	...	...	4·8	"	"	"	...	...	"	5	0	0	7	12	4	
5.	Ditto	...	...	...	...	3·5	"	"	"	...	...	"	5	0	0	7	5	6	
6.	Ditto	...	...	...	...	Refusing	to	sell	...	...	...	"	2	0	0	4	12	4	
7.	North Brisbane	...	...	...	...	1·7	per cent.	added	water	...	...	"	7	0	0	7	10	4	
8.	Ditto	...	...	...	...	14·0	"	"	"	...	...	"	15	0	0	17	5	6	
9.	Ditto	...	...	...	...	8·9	"	"	"	...	...	"	12	0	0	12	3	6	
10.	South Brisbane	...	...	...	...	Deficient	in	butter-fat,	23·4	per cent.	...	"	5	0	0	7	12	4	
11.	North Brisbane	...	...	...	...	Refusing	to	sell	...	...	...	"	5	0	0	7	12	4	
12.	Ditto	...	...	...	...	"				...	...	"	1	0	0	6	8	6	
13.	Ditto	...	...	...	...	11·1	per cent.	added	water	...	...	"	8	0	0	8	10	4	
14.	Ditto	...	...	...	...	14·5	"	"	"	...	...	"	5	0	0	7	5	6	
15.	South Brisbane	...	...	...	...	Deficient	in	butter-fat,	15·4	per cent.	...	"	5	0	0	7	12	4	
16.	Ditto	...	...	...	...	9·2	per cent.	added	water	...	...	"	5	0	0	7	12	4	
TOTALS						...						£100 0 0				£134 11 4			

APPENDIX 10.

PROSECUTIONS FOR LIGHT-WEIGHT BREAD, 1ST JULY, 1910, TO 30TH JUNE, 1911.

Place						Total Shortage.						Result.				Total Fine and Costs Allowed.			
1.	Brisbane	...	...	...	...	Obstruction	of	execution				Fined	£	s.	d.	£	s.	d.	
						of Act						10	0	0		12	5	6	
2.	Beaudesert	...	...	...	...	14	oz.					"	0	14	0	4	5	0	
3.	Ditto	...	...	...	...	27	"					"	1	7	0	4	17	6	
4.	Southport	...	...	...	...	30½	"					"	3	0	0	3	5	4	
5.	Brisbane	...	...	...	...	26½	"					"	2	12	0	4	17	6	
6.	Toowoomba	...	...	...	...	32¾	"					"	1	8	3	3	13	9	
7.	Ditto	...	...	...	...	12¼	"					"	0	12	3	2	17	9	
8.	Ditto	...	...	...	...	28	"					"	1	8	6	3	14	0	
9.	Helidon	...	...	...	...	28	"					"	0	14	1½	2	19	7½	
TOTALS						...						£21 16 1½				£42 15 11½			

APPENDIX 11.

PROSECUTIONS FOR SPITTING ON FOOTPATHS, FROM 1ST JULY, 1910, TO 30TH JUNE, 1911.

Number.		Place.				Result.						Fined.				Total Fine and Costs Allowed.			
1		Brisbane	...	...	...	Convicted	...	...				£	s.	d.		£	s.	d.	
2		Ditto	...	...	...	ditto	...	...				0	16	6		1	1	0	
3		Ditto	...	...	...	ditto	...	...				0	16	6		1	1	0	
4		Ditto	...	...	...	ditto	...	...				1	0	0		1	3	6	
5		Ditto	...	...	...	ditto	...	...				2	0	0		2	3	6	
6		Ditto	...	...	...	ditto	...	...				2	0	0		2	3	6	
7		Ditto	...	...	...	ditto	...	...				2	0	0		2	3	6	
8		Ditto	...	...	...	ditto	...	...				2	0	0		2	3	6	
9		Ditto	...	...	...	ditto	...	...				2	0	0		2	3	6	
10		Ditto	...	...	...	ditto	...	...				0	10	0		0	13	6	
11		Ditto	...	...	...	ditto	...	...				0	10	0		0	13	6	
12		Ditto	...	...	...	ditto	...	...				0	10	0		0	13	6	
		TOTALS				...						£14 19 6				£17 4 6			

APPENDIX 12.

NOTIFICATION OF INFECTIOUS DISEASES RECEIVED, UNDER SECTION 134, FROM MEDICAL PRACTITIONERS WITHIN THE STATE IN RESPECT OF STATUTORY NOTIFIABLE DISEASES AND DEATHS FROM PHTHISIS, 1ST JULY, 1910, TO 30TH JUNE, 1911.

Notifiable Disease.													Notifications Received.
Continued fever ... ..	...	...	...	...	...	...	...	...	...	...	...	...	908
Diphtheria ... ..	...	...	...	...	...	...	...	...	...	...	...	...	61
Erysipelas ... ..	...	...	...	...	...	...	...	...	...	...	...	...	4
Membranous croup ... ..	...	...	...	...	...	...	...	...	...	...	...	...	11
Puerperal fever ... ..	...	...	...	...	...	...	...	...	...	...	...	...	184
Phthisis ... ..	...	...	...	...	...	...	...	...	...	...	...	...	342
Scarlet fever ... ..	...	...	...	...	...	...	...	...	...	...	...	...	667
Typhoid fever ... ..	...	...	...	...	...	...	...	...	...	...	...	...	2
Cerebro-spinal meningitis ... ..	...	...	...	...	...	...	...	...	...	...	...	...	79
Ankylostomiasis ... ..	...	...	...	...	...	...	...	...	...	...	...	...	2,158
TOTAL ... ..	...	...	...	...	...	...	...	...	...	...	...	...	109
Phthisis deaths notified ... ..	...	...	...	...	...	...	...	...	...	...	...	...

APPENDIX 13.

DISTRIBUTION OF CASES OF INFECTIOUS DISEASES NOTIFIED FROM THE BRISBANE METROPOLITAN AREA, UNDER SECTION 134; ALSO CASES FROM HOSPITALS AND OTHER INSTITUTIONS, 1ST JULY, 1910, TO 30TH JUNE, 1911.

Local Authorities.					Typhoid Fever.	Scarlet Fever.	Puerperal Fever.	Diphthoria.	Erysipelas.	Phthisis.	Total Notified.	Phthisis Deaths.
Brisbane ... ..	...	...	...	...	80	129	4	78	20	75	386	47
South Brisbane ... ..	...	...	...	...	33	104	1	58	12	60	268	42
Ithaca ... ..	...	...	...	...	22	46	1	34	7	20	130	7
Windsor ... ..	...	...	...	...	12	19	1	13	3	11	59	6
Taringa ... ..	...	...	...	...	3	1	...	2	3	6	15	4
Enoggera ... ..	...	...	...	...	1	1	...	1	...	1	4	...
Sandgate ... ..	...	...	...	...	1	4	...	6	3	3	17	...
Balmoral ... ..	...	...	...	...	1	1	...	3	2	5	12	2
Belmont ... ..	...	...	...	...	...	...	...	...	...	1	1	...
Wynnum ... ..	...	...	...	...	1	21	...	1	...	1	24	...
Toombul ... ..	...	...	...	...	6	18	...	7	1	1	33	...
Toowong ... ..	...	...	...	...	8	13	1	10	3	6	41	...
Yeerongpilly ... ..	...	...	...	...	...	...	...	1	...	1	2	...
Kedron ... ..	...	...	...	...	3	1	...	3	1	2	10	1
Indooroopilly ... ..	...	...	...	...	...	...	...	1	...	1	2	1
Coorparoo ... ..	...	...	...	...	3	9	...	3	...	2	17	...
Stephens ... ..	...	...	...	...	5	22	...	10	1	6	44	2
Sherwood ... ..	...	...	...	...	...	1	...	6	...	4	11	1
Hamilton ... ..	...	...	...	...	2	8	2	7	1	5	25	...
Tingalpa ... ..	...	...	...	...	...	...	...	...	...	...	...	...
GRAND TOTAL ... ..	...	...	...	...	181	398	10	244	57	211	1,101	113
Reported by Hospitals and other institutions					80	101	9	94	25	91	400	...
Reported by Medical Practitioners (Section 134)					101	297	1	150	32	120	701	...